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ORIGINAL ARTICLES.

THE QUANTITATIVE ESTIMATION OF THE RENNET-ZYMOGEN; ITS DIAGNOSTIC VALUE IN CERTAIN DISEASES OF THE STOMACH.[1]

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THE detection and the estimation of free hydrochloric acid in the gastric contents are of considerable importance in the diagnosis of diseases of the stomach, but conclusions based upon these facts alone may be wholly fallacious, as it is well known that mental conditions and various external influences, as well as disturbances of the circulation, influence the secretion of hydrochloric acid. Not only marked changes in the mucous membrane, therefore, but also functional disturbances may cause diminution or absence of hydrochloric acid.

Quantitative examinations for free hydrochloric acid give us but little knowledge of the degree of destruction of the gastric mucous membrane, for, while free hydrochloric acid is usually entirely absent in marked change of the mucous membrane, we frequently find the same condition when the changes are but slight. It is, therefore, generally admitted that, in order to draw proper conclusions concerning the true condition of the stomach from examinations for free hydrochloric acid, the examinations should be frequently repeated. But even then we may still be in doubt as to whether there is a nervous anacidity, slight or marked catarrh, or a hyperemic condition of the stomach, secondary to diseases of some other organ.

While such variations are found in regard to the secretion of hydrochloric acid, the secretion of the ferments, or rather of their zymogens, bears a definite relation to the pathologic changes present. Boas has shown that external influences, as well as congestive conditions, have little effect on the secretion of these substances, and that a marked diminution in their quantity is aways indicative of some serious gastric lesion. The quantitative estimation of pepsin and its proenzyme has, until recently, been attended with great difficulty. Methods have been devised for this purpose by Boas,[1] Johannessen,[2] and others, but exact results cannot be obtained by any of these methods. It is, therefore, necessary, in exact examinations, to test the peptic strength by weighing the fibrin before, and then again after partially digesting it in a given quantity of gastric juice.

This method is quite complicated and wholly unsuited for practical purposes. A new method for the estimation of pepsin, which is simple and seems to give exact results, has recently been devised by Hammerschlag.[3] This method has not as yet been generally employed.

The estimation of the rennet-ferment (lab) and its proenzyme (labzymogen) is very simple. The method usually employed is that of Boas:

The detection of the milk-curdling ferment is as follows:[4] Ten c.cm. of gastric filtrate are exactly neutralized with a $\frac{1}{10}$ normal NaOH solution, and 10 c.cm. of neutral milk are added, and the mixture placed in an incubator at 38° C. If the rennet-ferment is present, a casein-coagulum is formed in from ten to fifteen minutes.

The detection of the rennet-zymogen is as follows:

To 10 c.cm. of gastric filtrate, made slightly alkaline, 2 c.cm. of a 1 per cent. solution of calcium chlorid are added, and then 10 c.cm. of milk, and the mixture placed in the thermostat.

If the rennet-zymogen is present, a heavy cake of casein is precipitated in a few minutes.

The quantitative estimation of the milk-curdling ferment is made as follows: A part of the gastric filtrate is exactly neutralized, and portions are diluted with distilled water ($\frac{1}{10}$, $\frac{1}{15}$, $\frac{1}{20}$, etc.). Five c.cm. of each of these portions are placed in beakers, 5 c.cm. of neutral milk are added, and the mixtures placed in the thermostat. It can thus easily be determined at which dilution the ferment is no longer active.

As to the quantitative estimation of the rennet-zymogen, a part of the gastric filtrate is made slightly alkaline and portions diluted ($\frac{1}{10}$, $\frac{1}{15}$, $\frac{1}{20}$, $\frac{1}{25}$, $\frac{1}{30}$, $\frac{1}{35}$, etc.). To 5 c.cm. of each of these portions 1 c.cm. of a 1 per cent. solution of calcium chlorid is added, and 5 c.cm. of milk. The dilution can thus be deter-

[1] Read at the annual meeting of the Medical and Chirurgical Faculty of Maryland, April 24, 1895.

[1] Boas: Allgemeine Diagnostik und Therapie, 3. Auflage, S. 187.

[2] Johannessen: Studienüber die Fermente des Magens, Zeitschrift für klin. Medicin, Bd. 17, H. 3 und 4.

[3] Hammerschlag: Ueber eine neue Methode zur quantitative Pepsinbestiumung. Internationale klin. Rundschau, Jahrg. viii., Sept. 1894, No. 59.

[4] Loc. cit., S. 188.

mined at which the rennet-zymogen is no longer active.

By means of this method Boas has arrived at the following conclusions:

1. In spite of the absence of free hydrochloric acid, the rennet-ferment may still be present, but only in small amount, in dilutions of from $\frac{1}{10}$ to $\frac{1}{20}$.

2. In the absence of free hydrochloric acid the zymogen may be present in normal amount, even in dilutions of from $\frac{1}{100}$ to $\frac{1}{150}$. The repeated demonstration of the normal proportion of the zymogen proves with great certainty that an organic gastric disorder is not present, and that there is either a neurosis or a secondary gastric congestion.

3. The zymogen may be diminished one-half. This is most frequently due to a catarrh of moderate intensity. The more nearly the zymogen reaches the normal the greater is the probability of entire recovery under proper treatment.

4. If the labzymogen is much diminished in quantity, *e. g.*, $\frac{1}{10}$, or entirely absent, there is always a severe and incurable catarrh, which may be primary, or due to another disease, as carcinoma, amyloid degeneration, etc.

5. In the conditions represented by 1, 2, and 3, the secretion of hydrochloric acid may be increased by proper treatment. In the condition represented by 4, there is but little hope of renewing the secretion of hydrochloric acid.

During several years I have as a routine practice made examinations of the gastric contents obtained one hour after an Ewald test-breakfast, to determine the activity of the milk-curdling ferment and its zymogen. It is to the result of these examinations that I wish to call attention.

Of the cases selected from many hundreds only those have been tabulated in which at least three examinations were made. In order to reduce the tables still more I have omitted many cases giving results exactly similar to others already given.

In Table I are represented the cases in which there was a normal percentage of free hydrochloric acid. There are here tabulated the results obtained from three normal cases, three cases of atony, a case of simple dilatation, and three cases of nervous dyspepsia. In order to make the tables more intelligible, the points of dilution at which the milk-curdling ferment and its zymogen were still present are placed in full numbers in this as well as in the following tables. They should, therefore, read $\frac{1}{12}$ for 12; $\frac{1}{50}$ for 50, etc.

It is seen that the degree to which the milk-curdling ferment may be diluted is much less than that of its zymogen, for, while the former is never present in dilutions less than $\frac{1}{40}$, its zymogen may at times be still distinctly recognized in dilutions of $\frac{1}{150}$.

TABLE I.—CASES WITH NORMAL PERCENTAGE OF FREE HYDROCHLORIC ACID.

Number of examination.	Name.	Disease.	Total acidity.	Per cent. of free HCl.	Milk-curdling ferment.	Milk-curdling zymogen.
1	F. J.	Normal	50	0.175	12	150
2	...	.....	64	0.161	15	150
3	...	.....	48	0.148	28	100
4	E. F.	Normal	42	0.139	24	75
5	..	.....	46	0.158	22	40
6	...	.....	54	0.149	22	50
7	J. M.	Normal	55	0.169	18	80
8	...	.....	51	0.160	40	25
9	...	.....	58	0.154	32	150
10	F. B.	Atony	40	0.143	10	125
11	...	.....	44	0.145	34	75
12	...	.....	42	0.141	15	100
13	M. W.	Atony	48	0.159	18	150
14	...	.....	50	0.151	15	75
15	...	.....	44	0.139	40	50
16	L. P.	Atony	50	0.148	38	70
17	...	.....	48	0.139	12	125
18	...	.....	55	0.152	40	50
19	H. K.	Simple dilatation . .	68	0.169	12	90
20	...	.....	62	0.165	10	100
21	...	.....	63	0.160	35	55
22	H. T.	Nervous dyspepsia . .	48	0.142	40	35
23	...	.....	44	0.149	12	90
24	...	.....	40	0.134	16	100
25	K. S.	Nervous dyspepsia . .	42	0.140	15	125
26	...	.....	44	0.139	40	35
27	...	.....	48	0.134	20	100
28	H. T.	Nervous dyspepsia . .	50	0.138	8	75
29	...	.....	46	0.141	12	150
30	...	.....	40	0.135	24	70

TABLE II.—CASES WITH INCREASED AND DIMINISHED PERCENTAGE OF FREE HYDROCHLORIC ACID.

Number of examination.	Name.	Disease.	Total acidity.	Per cent. of free HCl.	Milk-curdling ferment.	Milk-curdling zymogen.
1	B. C.	Supersecretion . .	89	0.305	40	50
2	...	.....	86	0.302	35	45
3	...	.....	82	0.297	40	25
4	J. A.	Supersecretion . .	98	0.301	32	25
5	...	.....	96	0.302	30	55
6	...	.....	82	0.289	25	10
7	D. W.	Superacidity; ulcer .	84	0.286	15	25
8	...	.....	89	0.305	25	20
9	...	.....	90	0.301	20	30
10	P. J.	Superacidity; nerv. dysp.	90	0.302	20	30
11	...	.....	89	0.302	20	35
12	...	.....	88	0.298	15	30
13	G. A.	Superacidity; nerv. dysp.	88	0.301	25	15
14	...	.....	92	0.302	20	20
15	...	.....	98	0.310	15	25
16	F. L.	Superacidity; nerv. dysp.	92	0.301	15	20
17	...	.....	89	0.295	20	55
18	...	.....	86	0.302	35	45
19	F. K.	Subacidity; nerv. dysp. .	30	0.0 8	35	30
20	...	.....	28	0.084	20	35
21	...	.....	26	0.082	10	40
22	J. D.	Subacidity; nerv. dysp. .	24	0.081	25	40
23	...	.....	28	0.086	25	20
24	...	.....	29	0.089	10	25
25	S. F.	Chronic gastritis . .	34	0.102	20	50
26	...	.....	26	0.091	12	40
27	...	.....	24	0.084	14	35
28	K. M.	Chronic gastritis . .	34	0.096	18	25
29	...	.....	38	0.099	12	20
30	...	.....	36	0.104	14	25
31	L. P.	Chronic gastritis . .	37	0.098	10	25
32	...	.....	34	0.098	14	20
33	...	.....	32	0.092	20	15

In Table II are represented the cases with increased or diminished percentage of free hydrochloric acid. There are two cases of supersecretion, a case of superacidity due to ulcer, two cases of nervous dyspepsia, all with marked superacidity, besides three cases of subacidity (nervous dyspepsia), and three cases of chronic gastritis with subacidity.

The milk-curdling ferment is not found in dilutions beyond $\frac{1}{40}$; its zymogen may be present in dilutions of from $\frac{1}{60}$ to $\frac{1}{10}$.

In Tables III A and III B are found the cases of nervous dyspepsia and secondary gastric disturbances, with entire absence of free hydrochloric acid. It is seen that while the ferment may be markedly diminished, its zymogen may still be present in dilutions of from $\frac{1}{180}$ to $\frac{1}{60}$.

TABLE III.—GASTRIC DISTURBANCES IN WHICH THERE IS AN ABSENCE OF FREE HYDROCHLORIC ACID.

A. Nervous Dyspepsia.

No. of examination.	Name.	Total acidity.	Milk-curdling ferment.	Milk-curdling zymogen.	No. of examination.	Name.	Total acidity.	Milk-curdling ferment.	Milk-curdling zymogen.
1	K. T.	8	5	100	7	P. L.	8	15	80
2	...	7	8	75	8	...	12	15	110
3	...	12	5	60	9	...	10	10	130
4	J. S.	12	12	70	10	F. M.	20	12	100
5	...	14	5	80	11	...	22	5	80
6	...	20	5	150	12	...	18	8	60

B. Secondary Gastric Disturbances (Hyperemic Condition of Stomach).

No. of examination.	Name.	Primary disease.	Total acidity	Milk-curdling ferment.	Milk-curdling zymogen.
1	K. F.	Pulmonary tuberculosis	8	5	75
2	...	.....	12	8	80
3	...	.....	10	5	75
4	L. F.	Pulmonary tuberculosis	15	5	65
5	...	.....	14	10	75
6	...	.....	8	8	100
7	P. M.	Pulmonary tuberculosis	12	5	120
8	...	.....	10	12	80
9	...	.....	14	5	65
10	J. P.	Heart-disease . .	20	16	150
11	...	.....	12	5	75
12	...	.....	10	8	150
13	J. F.	Heart-disease . .	14	10	75
14	...	.....	10	10	100
15	...	.....	14	15	80
16	W.S.	Heart-disease . .	18	14	100
17	...	.....	9	8	150
18	...	.....	15	10	80

In Table III C we have represented cases of chronic gastritis. The milk-curdling ferment is much diminished (even to 0), the zymogen between $\frac{1}{80}$ and $\frac{1}{5}$. In cases of carcinoma, Table III D, the milk-curdling ferment is diminished, its zymogen reduced to from $\frac{1}{40}$ to $\frac{1}{15}$.

C. Chronic Gastritis.

No. of examination.	Name.	Total acidity.	Milk-curdling ferment.	Milk-curdling zymogen.	No. of examination.	Name.	Total acidity.	Milk-curdling ferment.	Milk-curdling zymogen.
1	B. H.	8	5	20	16	M. W.	0	0	5
2	...	10	8	25	17	...	0	0	5
3	...	12	10	10	18	...	0	0	7
4	G. F.	12	5	5	19	O. S.	0	0	10
5	...	10	10	25	20	...	0	0	5
6	...	14	12	15	21	...	0	0	5
7	S. S.	8	5	30	22	J. R.	0	0	7
8	...	9	5	10	23	...	0	0	5
9	...	10	5	25	24	...	0	0	7
10	B. W.	10	8	20	25	...	0	0	5
11	...	8	10	25	26	...	0	0	5
12	...	6	10	30	27	...	0	0	3
13	F. W.	4	12	25					
14	...	6	5	10					
15	...	4	5	5					

D. Carcinoma.

No. of examination.	Name.	Total acidity.	Milk-curdling ferment.	Milk-curdling zymogen.	No. of examination.	Name.	Total acidity.	Milk-curdling ferment.	Milk-curdling zymogen.
1	D. B.	8	10	20	13	F. L.	15	5	35
2	...	4	8	20	14	...	14	10	40
3	...	6	10	15	15	...	12	10	35
4	A. C.	10	15	25	16	O. M.	12	10	35
5	...	14	5	30	17	...	8	12	40
6	...	12	12	35	18	...	6	15	25
7	F. G.	14	8	25	19	L. T.	8	15	30
8	...	12	5	25	20	...	8	15	35
9	...	14	5	20	21	...	10	8	40
10	B. T.	13	5	20	22	S. L.	12	8	35
11	...	19	8	25	23	...	20	5	35
12	...	21	8	25	24	...	8	5	30

We have thus shown that in conditions in which the free hydrochloric acid is absent, but in which there is no pathologic change in the stomach, such as in nervous dyspepsia and secondary gastric catarrh, the zymogen is still present in dilutions ranging between $\frac{1}{180}$ and $\frac{1}{60}$. In those conditions, however, in which there are structural changes in the gastric mucous membrane, such as in chronic gastric catarrh and carcinoma, the zymogen is markedly diminished ($\frac{1}{80}$—$\frac{1}{5}$), depending upon the severity of the disease. The more nearly the zymogen reaches the zero-point the greater the destruction of the gastric mucous membrane, and the less the chance for complete recovery.

Our conclusions may be summed up as follows:

1. Under normal conditions the milk-curdling ferment may be present in dilutions up to $\frac{1}{40}$, the zymogen up to $\frac{1}{180}$.

2. In those cases in which there is a normal or diminished percentage of free hydrochloric acid, the milk-curdling ferment and its zymogen may be present in normal quantities or may be markedly diminished. Their estimation, therefore, in these cases is of little value.

3. The estimation of the milk-curdling ferment and its zymogen is of great diagnostic as well as prognostic importance in those cases of gastric disorder accompanied by an entire absence of free hydrochloric acid. In these cases (chronic gastritis or carcinoma) there is marked diminution of the zymogen ($\frac{1}{40}$–o), depending upon the severity and extent of the disease. In cases of nervous dyspepsia, as well as in secondary catarrh, the zymogen is present in normal proportions in dilutions of from $\frac{1}{100}$ to $\frac{1}{60}$. We can, therefore, readily determine whether there is actual disease of the gastric mucous membrane or simply a nervous or congestive condition.

4. In those cases in which there is an absence of free hydrochloric acid, and in which the labzymogen falls between $\frac{1}{60}$ and $\frac{1}{40}$, it is impossible to determine at once whether there is a catarrhal condition or nervous dyspepsia present. Several examinations must be made to determine whether the labzymogen ranges above $\frac{1}{60}$ or below $\frac{1}{40}$.

5. In cases of chronic gastritis the examination for the labzymogen is of considerable prognostic importance. In those cases in which the labzymogen is diminished from $\frac{1}{15}$ to o there is no chance of recovery; in those in which it is diminished from $\frac{1}{40}$ to $\frac{1}{30}$ there is a possibility that judicious treatment may result in recovery.

ANOTHER WORD ON ADENOID GROWTHS OF THE PHARYNX.[1]

BY HARRISON ALLEN, M.D.,
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IF I am right, three clinical states exist as the result of the presence, under certain conditions, of adenoid tissue in the naso pharynx. First, one due to hypertrophy of the mass, and leading to obstruction of the naso-pharynx; second, one due to deformation of the bony walls of the naso-pharynx, which causes a growth of normal proportions to obstruct nasal respiration; and a third, one due to a growth normally situated in a capacious naso-pharynx which does not obstruct nasal respiration, but which acts in some obscure way to disturb seriously the general health.

In the first group are placed the conditions described by W. Meyer, now little more than a quarter of a century ago. The effects of adenoid hypertrophy in maintaining mouth-breathing, creating chest-deformation, exciting catarrh of the upper respiratory tract, impairing speech, and causing deafness, have been accepted by all observers.

In the second group of cases a small, narrow, highly angulated naso-pharynx, with tumid membranes, is occupied by a small normal adenoid mass. The symptoms of group two are those of group one, but their significance is different. The interest is not so much with the pharynx as with the skull. Examples are seen in subjects of cretinoid microcephaly. They are to be met with in institutions for the feeble-minded, and occasionally in private practice.

In the third group, the mere size of the growth is relatively unimportant, but the fact that it is in itself mischievous is of first importance. Occasionally a child will come under notice in whom there are many phases of malnutrition: stunted development, anemia, capricious appetite, intractable disposition, mental perversity or dulness, and a tendency to take cold from slight exposure. Such a child, nevertheless, may enjoy normal respiration. There is no deformity of the chest and face; no enlargement of the tonsils; and, as a consequence, it is apparently not justifiable for the physician to make an exploration of the naso-pharynx, much less for him to propose an operation. All the conditions mentioned may be readily accounted for by parents through interference with the general health. The very fragility of the child excuses relaxation of domestic discipline, and some at least of the phases of ill-health may be accounted for by an inheritance of malnutrition. However, I recall an instance in which the maternal judgment proved to be better than my own. A lady, who had known of an operation for the removal of an adenoid growth which resulted in benefit, brought to me a child, aged six years, who exhibited the signs already mentioned. The object the mother had in view in reporting was to have me operate. I declined to do so, because I could not diagnosticate adenoid hypertrophy. After having the child under observation at long intervals for two years, no material improvement being acknowledged, and the mother still insisting that an operation be performed, I conferred with the family attendant, Dr. D. Murray Cheston, and we agreed that under the circumstances it would be well to make an examination under ether. Introducing the index finger above the velum I found to my surprise an adenoid growth. The naso-pharynx was capacious and of high vault. This accounted for the fact that the mass had not been detected. The growth was removed. The child recovered (as I believe entirely as a result of the operation) from all the conditions concerning which the mother had been solicitous.

Another case, that of a child six years old, who was sent to me by Dr. John H. Musser, was a subject of congenital syphilis. Nasal catarrh of an inflammatory type was present, accompanied by gelatinous exudates, which, becoming inspissated, formed "crusts." Fetor was present. The teeth were notched and otherwise characteristic; the nose was inordinately depressed at the bridge, and the skin

[1] Read before the Medical Society of the State of Pennsylvania, at Chambersburg, May 23, 1895.

was dry and harsh. After the removal of the nasal crusts the nose was found to be unduly capacious, and the space for nasal respiration more than sufficient. No chest-deformity existed. I accepted this case as one of atrophic catarrh, of syphilitic origin, and so treated it. It did not occur to me to explore the naso-pharynx. The patient was difficult to manage, and appeared to be just on the border-line between the normal child and the juvenile defective. It being impossible to properly cleanse the nasal chambers, I proposed, after an observation of the case extending over several months, with no essential gain, to etherize and carefully explore the nasal chambers, hoping in this way to remove some of the sources of the fetor. It occurred to me while the child was anesthetized that it would be well to explore the naso-pharynx. I cannot well express my astonishment when I found the vault occupied by a large growth. Permission being granted to remove the mass, it was ablated with the finger. The child made an excellent recovery, and in a short time every vestige of nasal disease disappeared. The change in this child was striking. His mental attitude was greatly changed for the better, and has since remained so. Here then was a case of adenoid disease which was remarkable only for the coincidence of its occurrence in a child the subject of congenital syphilis. The treatment for syphilis was not an important factor; that for ablating the adenoid was an all-embracing one.

The advantages of medical societies, as I understand them, are confined not merely to the reading of results of experience in practice, but to the making of suggestions as to what manner medical studies of all kinds should be pursued. As an appendix to my reports of cases I venture to make a few remarks as to the method of studying adenoid growths in the naso-pharynx.

Several years ago (*Trans. Amer. Laryng. Assoc.*, 1886, p. 9) I invited attention to the possibility of an abnormal adenoid growth being found associated with the pituitary body by means of the canal (Landzert's canal) through the base of the skull. Whether this may prove to be the case or not, it would be well in cases of death of children with adenoid disease (and this must frequently occur when we consider the large number of juvenile diseases that occur coincidently with the adenoid growth) that occasionally opportunity will be presented for careful post-mortem examination of the brain and the naso-pharynx. I would suggest that in such autopsies the base of the skull (embracing the membrane and outgrowths from the pharyngeal vault, the pituitary fossa, and the pituitary body) be removed as a single piece, and this be prepared in the usual way for microscopic examination. Together with this segment the pineal gland should be removed, prepared, and examined by the same methods. The teachings of embryology suggest that pharynygeal structures are related intimately to encephalic structures by means of the pituitary and pineal bodies; and pathology has already associated morbid states of the pituitary body with general nutritive processes. I remain of the opinion that adenoid growths, while, as a rule, acting mechanically, will occasionally manifest the symptoms of a veritable disease which is allied to other affections of the bloodvessel, gland, and lymph systems, and which should be regarded as having a dominating influence on metabolic processes. It is thus placed in alliance with akromegaly and myxedema.

REPORT ON HYDROPHOBIA.[1]

BY CHARLES W. DULLES, M.D.,
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DURING the time that has elapsed since the last meeting of this Society I have collected accounts of fifteen cases of what was called hydrophobia in the United States. Of these there were: Males, 10; females, 5. The ages ranged from three years (two cases) to eighty-three years (one case). The animals to which the disorder was ascribed were: In thirteen cases, dogs; in two cases, cats. The incubations varied from three weeks to six months. Four of the deaths followed bites of dogs unsuspected of having rabies. Of the fifteen cases, one was doubtless due to drink and uremia; one was considered to be hysteria at Bellevue Hospital, and died soon afterward under the care of the New York Pasteur Institute; three were plain lyssophobia (one dying in the New York Pasteur Institute), and one "mewing like a cat" (a cat-bite case).

The pernicious use of strong narcotics is notable in the treatment of many of the fifteen cases I have collected and the apparent uselessness of cauterizations with silver nitrate.

I have, since we last met, made a study of my records for five years of what I have labelled "mad-dog scares" in my notes. The result of this study indicates that in fifty-five instances of alarms about mad dogs, with a record of one-hundred-and-seventy-five persons (of all ages) bitten, I have found only three deaths from so-called "hydrophobia." This, if correct, would indicate that the natural mortality from the bites of rabid dogs is 1 : 58, or less than 2 per cent. The vast majority of the deaths attributed to hydrophobia have followed bites by unsuspected dogs, and very few have followed bites by dogs that ran amuck and that excited alarm at the time. It is a very curious fact, taken in connection with this one, that a very large number of the deaths

[1] Read by title before the Medical Society of the State of Pennsylvania, at Chambersburg, May 23, 1895.

from so-called hydrophobia follow the bites of dogs that had no history or appearance of any disease.

The number of cases for the past year is about what I have before reported for other years. The total probably does not include all the cases that have occurred in the United States; but I think that it represents the actual figures as accurately as the statistics attainable in other countries, without government assistance in the work of collecting statistics. Against this number of actual deaths we may set the absurd claims put out by Pasteur Institutes of so-called "cures." Last year the Institute in Paris treated 1194, all supposed to be liable to die of hydrophobia; and these figures will probably be used to support the assertion, copied into books all over the world, that Pasteur has reduced the mortality from hydrophobia to less than 1 per cent. of those bitten by rabid animals. It is astonishing and disheartening to find men occupying responsible professorial positions who fail to see the utter fallacy of such claims or to appreciate the wrong they do by accepting and approving them.

This suggests a thought in regard to treatment; and, first, the treatment of the bite. I am strongly opposed to the practice of cauterizing with silver nitrate, which has been an article of faith ever since it was used and recommended by the English veterinarian, Youatt.

I have seen and treated very many dog-bites, and have not used lunar caustic for thirteen years, and no person that I have treated has yet developed hydrophobia, so that the mortality of those treated by me is less than that of those treated in Pasteur Institutes. My treatment is simply thorough surgical cleansing and the application of a simple antiseptic dressing for a few days, with the positive assurance that there will be no danger of any disease.

The purpose of this short report does not require that I should go into the treatment of the disorder called hydrophobia when fully developed. I have described that fully in a paper in the *Therapeutic Gazette*, July 16, 1894.

ORIGINAL ADDRESS.

HOSPITALISM.[1]

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DEFINITION.—The dispensary-disease, or hospitalism, is a contagious, epidemic, ingravescent neurosis of civilization, limited (it is to be hoped) as regards time to the present *fin de siècle*, and as regards geographic distributions to urban populations; it attacks three considerable classes, the professional philanthropist, the commercial physician, and the social sponger, and, so far as medicine is concerned, is characterized by a maniacal propensity to professional suicide and to the spread of the disease by the inoculation of the will with the germs of the affection.

ETIOLOGY.—In brief, there are two chief etiologic factors. The first consists in the morbid desire of the lazy charity-monger to perform his duties vicariously; the second springs from the ambition of certain physicians to "get on, regardless." From the interactions and mutual complementings of these these two cachexiæ arises the distinct type of disease called hospitalism. These two agencies may need an added word of explanation. The first, the habit of the professional philanthropist, united to the universal desire to satisfy conscience with vicarious charity, is a widespread evidence of religious and ethical anemia, resulting in multiform sociologic denutrition and malfunction. The unregenerate layman, the civilized savage of modern times, is subject to a strange hypnotic delusion that the universal law of the biologic world antedating civilization is an egregious error. This law has up to now proceeded on the assumption that health and vitality are the conditions of permitted life, and that this health and vitality are based essentially upon pay or equivalence of service, upon personal self-dependence, desire, and effort. The modern philanthropist jauntily sets aside the wisdom of the ages, the necessities of evolution, and all that, and says he has a much better idea of how to conduct the universe than has God. Acting upon this antithetic science he says the conditions of social health are the encouragement of personal dependence and the increase of pauperism. His remarkable therapeutic theory is that to cure a disease we must administer a remedy that in health would produce exactly the symptoms of the disease. He therefore seeks to cure pauperism and dependence by increasing the number of paupers and dependants.

There is nothing so delightful to weak souls as the unctuous self-flattery of benevolence, and there are few things more satisfying than to rid one's self of a nagging duty. We thus have two classes of citizens: The tremendously large class that pay others to perform their personal duties, and the very small class of those that hire themselves out as agents of the first class. Charity and the personal relation to the poor and sick are thus deftly avoided by this copartnership, and almsgiving and institutionalism deceptively act as vicegerents of the genuine officers. This is the first factor of the dispensary-disease.

The second factor is confined to the medical profession itself. Like most other people, certain doctors desire to "get on, regardless." The vicarious and professional philanthropist offers him the means in the shape of institutions for the treatment of all other diseases except the hospitalic variety. (Perhaps in the progress of time and with the growth of virtue we shall have a special hospital in every large city where may be treated those in the acute and violent stages of the terrible disease, Epidemic Hospitalism.) If the enterprising doctor can get himself appointed "Professor," or "visiting physician" to one of the numerous institutions supplied by the vicarious philanthropist he will at once become better known; he will be furnished abundant

[1] A paper read before the American Academy of Medicine, at Baltimore, May 4, 1895.

"clinical material;" he will get ahead of his less fortunate brothers; and he will assuredly "get on, regardless." Lachrymose sentimentalism and philanthropic vanity are appealed to, endowments follow, wills and codicils to wills are made, and lo! there arise the lofty walls, the spacious wards, the waiting-rooms and operating-rooms, the crowded out-patient departments, the boards of wealthy trustees, and the not-to-be-forgotten medical staff itself.

Sometimes the physician bound to get on, the business doctor, *sans phrase*, conceals his ambition with the broad mantle of institutionalism itself, and it appears that the patient (the doctor-patient afflicted with the disease) indulges in a mild monomania of enthusiasm for his particular medical college, for medical science, and for the purposes of medical instruction. He solemnly contends that without an abundance of clinical material the best medical instruction would be impossible, and medical colleges would languish. His by-standing *confrères*, not yet afflicted with the disease, smile pityingly, both at the patient's delusions and at the sorry belief of the patient that he is deceiving those about him as to the real motives of his mind. Those healthy-minded attendants know that there will always be an abundance of clinical material supplied by the worthy, the deserving, and the really poor, without the appeal of competitive medical charity to those who could pay for medical service. They also know that nine times out of ten his medical college itself has no ethical or scientific *raison d'etre* whatever, but is itself simply another bit of objective evidence of personal and selfish ambition on the part of those who are "getting on, regardless" by means of their "Professorships" and the advertisement of official position. If one has been vouchsafed a clear glance into the inferno of political chicanery and undiluted deviltry that often go on to secure a professorship in a modern medical college, he will have a perfect demonstration of the altruism and the purity of the "charity" at work among the candidates. Men do not smash the entire Decalogue and commit all the venial sins in order to get an opportunity to be kind to the sick or to teach boys how to cure disease.

The etiology of hospitalism may, therefore, be epitomized as consisting, first, in the morbid desire of the well-to-do to rid themselves of real charity and of the duty of personal hand-to-hand and face-to-face kindness, by the self-deceptive, vicarious makeshift of almsgiving; and, second, to the get-on-regardless physician, reckless of the good of the profession, greedy of office and of patients, even though they are of the non-paying variety. Professorialism is only a variant of the disease of hospitalism, not a distinct type of disease.

SYMPTOMATOLOGY.—The disease afflicts three distinct classes of society, and has a somewhat different symptom-complex in each class.

1. The first, the endowing class, many of them placed by death beyond the reach of criticism, is composed of those that mistakenly preferred to patch up effects rather than altogether to prevent them, and who left their money without proper stipulation of the conditions under which their trust should be administered. Theirs is a mournful error. There are so many ways, especially in medicine, of preventing disease, of killing the causes of diseases, instead of curing the individualized results, that it is shameful that they did not add wisdom to pity, and to kindness, intellect. If we could but show the benevolent how much greater and more speedily reached would be the effect of their charity if applied to the encouragement of preventive medicine instead of to curative medicine: One well-equipped and endowed laboratory of hygiene, of bacteriology, or of sanitary science would do more for humanity than a dozen hospitals. To prevent diphtheria is a million times better than to keep everlastingly treating children ill with diphtheria.

But the unwise endower of hospitals committed another intellectual sin—and in this world intellectual error at last and always results in millionfold moral error. He failed to condition his gift with the necessary limitation that as a result of his charity none but the needy and deserving should profit by it. Without that condition, in the mutations of time, his kindness becomes an engine of evil, both to them who receive and to them who administer.

The endower is sometimes the State or the city. The fact itself proves that giving to hospitals has so long been recognized as right, *per se*, that no regard need to be paid as to how the money is spent. It is a most remarkable fact, this of giving away millions of the public money without a single stipulation, and hardly without a demand for accounting. When given to public officers for State asylums and hospitals the precedent is bad enough, but to church, sectarian, and college hospitals, and even to private institutions—this decidedly is to be thought twice about.

In the scramble of the competitive medical-charity debauch, the hungry institutions have hit upon a plan of making the universal public a universal endower. Everybody must be made to feel how good he is and to experience the pleasures of almsgiving. We thus have every imaginable form and invention of beggary spurred to the limit of endurance and of impertinence. Hospitals Sundays, fairs, "dances for sweet charity," masked gambling, and heaven knows what else, are instituted. It might, with self-restrained people, it certainly should, suggest a little prudence to see how prominent in getting up and pushing on these things are the wives, mothers-in-law, the personal friends, or the relatives of the ambitious visiting physician, or would-be professor, the advertiser, the newspaper doctor, *et hoc genus omne*. The motive of self-seeking is too often but poorly, very poorly, concealed, and sometimes it is thought good enough to boast about.

2. The second class, the lay-public, likewise suffers from the disease, although it thinks itself very cunning and lucky in having the disease. There are more diseases than hysteria that people love to suffer with, and the dispensary-affection is an example. There is no evil that is more ruinous than the awful one of communism. When a man gets that poison in his blood he will be a curse to the world until he is well-hanged, thoroughly dead, and everlastingly buried. There is no curse so fatal as the curse of desiring to get something for nothing. It is the half-hidden rock upon which the very ship of state, democracy itself, is running headlong. Nothing is serving so subtly and so powerfully to prevent physical and social health, and to keep the world in the thraldom of disease, as medical beggary and medical communism. When a man buys medical service for nothing he pays a high price for it. He cultivates the habit of lazy reliance on medical aid, and grows

careless of hygiene. The people think they are fortunate in being treated for nothing, but instead of curing, the "treatment" really fastens the disease perpetually upon the very heart of the body politic. The medical profession is bound to the treadmill of curing individual cases and the effects of disease, instead of shutting off the causes of disease. The profession is so hardly pressed and so poorly paid that its members have no time to prevent disease. One of the great curses of medicine is the commercial medical colleges, with the resultant superabundance of doctors. The hospital and dispensary disease is encouraged by (nay, is one of the direct results of) the commercial medical college, and the vicious circle is completed by the mere reversal of the process. The rivalries and ambitions and "politics" of competitive medical charities, displayed every day stark naked to the public, at once arouse and disgust the world, and keep low that standard of professional dignity and honor, so that the profession cannot demand and command health. Hygiene and preventive medicine could at once halve the death-rate if we had the respect of the community, if we but spoke clearly and could carry to realization the known laws of life-saving.

If the cunning Communist only got what he thinks he is sponging! But every physician knows well enough he does not get it. How can one man diagnosticate the diseases of a hundred patients with scientific precision and treat them effectively in an hour? I may not speak dogmatically of other departments of medicine than my own, but I must confess that out of hundreds of cases of hospital refraction-work that I have afterward examined in my private office I have never yet seen one, my own included, that was correct. If only the *deserving* poor were treated, there would not be the crowds; if the physician received even the smallest fee, that fact would make the patient the master instead of the obsequious sponger; and then the doctor's work would have to be better, or the natural laws of competition would soon settle the fate of the bungler, and the "hustler," and the "cooker" of hospital statistics.

I am not at all certain as to the effect upon the social world of the free treatment of patients with syphilis and gonorrhea and alcoholism—a fact that constitutes a large part of hospital-disease. There are two sides to that question. I am not a little doubtful as to the ethics, and even as to the worldly wisdom of turning the hospital into an annex of the bagnio and the bar-room, a convenience whereby the natural punishment of the infractions of the sexual and hygienic laws (upon which life itself rests) may be escaped. It is not quite certain that we can get the best of God in such ways. There is entirely too much of the "prophylaxis-of-gonorrhea" business tainting the whole profession, and literally befouling much hospital-practice. One might more dogmatically decide as to the wisdom of the common social commingling of the prostitute and the innocent in the hospital-wards and the dispensary waiting-rooms.

3. But the physician is interested in his profession, and the influence of hospitalism upon our guild is becoming pernicious in the extreme. Take the simple fact of hospital-manners. I well understand that neither the possession of the doctorate degree, nor the possession of the knowledge and skill it should certify, can make a man a gentleman. But there is no doubt that the instant influence of the necessity of treating crowds of mingled deserving poor and of indistinguishable spongers acts disastrously upon the physician's disposition and manners. The very work wherein gentle kindness is as the sunshine's benediction over the gracious harvest-fields of benevolence is transformed into bitterness and harshness. What is more disgusting than arrogance and dictatorialness in a physician? What is more common in hospitals and dispensaries? A dog judges of his master's mood by the manner and the *timbre* of voice, although he understands hardly a word of language proper. Every hospital-patient, likewise, forms quick conclusions as to the man's character under whose care he comes, and instead of gratitude for the service rendered the ungentlemanly physician is breeding through the community a condition of mind that bodes no good for medicine. The patient thinks himself sharp to secure some benefit from grudging surliness, and the overworked, non-paid, half-excusable doctor is glad to get through his job in one or another wretched way. "He has the European habit and style"—such is the patient's verdict. The patients know well enough when they are looked upon as "clinical material," and when, on the other hand, they are sympathetically treated as unfortunate human beings, whom we have the *privilege* of helping.

And this leads to the thought that nothing so speedily and surely as hospitalism leads to the degeneration of the physician into the therapeutic or pathologic fiend. If an interne or visiting physician hangs about a hospital beyond a certain time, as is well known, the more certainly will he fail as a practising physician. Every day in the hospital teaches him to dissociate disease from humanity, and to fix his attention upon morbidity, *per se*. He learns to treat disease, and not the diseased human being. The laboratory, necessary as it is, runs the danger of becoming the execution-chamber of practical therapeutics. Every disease must be seen through the lens of personality before it can be thoroughly understood. There is no disease, there are only diseased tissues—and the tissues are alive, and there is a living soul unifying all the tissues into that strange product of life, Homo; and Homo is not one individual, but includes conditions, family, heredity, age. The rage for "clinical material" is becoming a genuine mania, itself a downright disease, a disgrace to curative medicine. Street-car placards and column-long newspaper "ads" soliciting patients are part of the expenses of some hospitals. From a daily paper I clipped the following racy account; it has too much of the air of truth to be more than half-lie:

"A local employment agency has instituted a unique departure. A few days ago an advertisement appeared in the morning paper, which read: 'Wanted—A young man suffering from pulmonary or heart disease. Examination free.' Inquiry at the office of the advertiser elicited the information that the 'young man' was wanted for the various hospitals about town, which were anxious to get live subjects for clinical demonstration. 'The applicants are received here,' said the manager of the agency, 'and are promptly examined. The eligible ones, that is, those who are found to be victims of the two diseases in question, are given cards for presentation at the hospitals which we serve. They are paid well for their services, and they suffer no inconvenience from their experience at the hands of the surgeons. Sometimes, in fact, they reap benefits which they had not counted on, some of them regaining complete health under the treatment. So you see pulmon-

ary and heart affections command a sort of premium. Sometimes we find among the applicants some cases even more interesting than we had expected. These men, of course, command more money than the ordinary sufferers.'"

But all these methods of trapping game are often only diversions of the strong, subdominant motive of practice-hunting and success-advertising. Just as the great professors give lectures at medical colleges in order to get consulting practice, so will men consent to bang through a lot of "charity-cases" at the hospital and dispensary in order to have the *éclat* of the position and the fame that in one way or another brings private practice. Sometimes, indeed, it is not by the indirect means of the fame that patients are secured, but upon one excuse or another—the *modus operandi* is well known—the hospital is made a very *direct* feeder of the private office.

And what brutal injustice is the indiscriminate treatment of hospital-crowds to the younger members of the profession, and to those, the immense majority, who are not of the elect—the poor fellows who are neither professors, chiefs, nor visiting physicians; it is among the lay poor that the professional poor must work. After years of heroic preparation the young graduate finds the very teachers who have taken his money for instruction treating questionless and gratis those who should be his own pay-patients. I have a profound sympathy for the young and unsuccessful physician. He has been outrageously deceived, and is daily being outrageously treated by men of his own guild, to whom he has a natural right to turn for aid in this matter. If he settle in the country, the recklessness of the city-hospital and dispensary government pursues him like a fury. The non-discriminating urban physician receives the country patient without question. It is thought that the distance from which the countryman comes cancels all scruples as to duty to one's colleagues. Medical ethics have at best very narrow geographic limitations.[1] Only the countryman's local physician knows whether he is able to pay or not—but how often is the matter asked by the city brother? Even in private practice the rights of the distant local physician are but little considered; how much less, then, are they considered at the dispensary?

And thus, to summarize, are we cruelly, consciously, persistently committing professional suicide. Every noodlehead knows that that which costs no thought or labor is not appreciated by men, and yet we tumble over each other in our mad rush to do our grand work for nothing. We make the most valuable thing the most despised by our pusillanimous politics, until the poor public learns, instead of respect, contempt of us. Where is the hospital for free legal advice? And yet which is the most honored, medicine or the law? Oh! for a breath, nay, a blast of professional self-respect that would sweep us into unity. Why should we not have some organization, some *esprit de corps*? Even thieves preserve some sort of honor among themselves.

TREATMENT.—Let us briefly consider the treatment of the disease. What can be done to abate this graceless nuisance? A thousand good hearts and wise minds are racked by this problem. It is almost impossible to find a way out. In fact, we have gotten ourselves so pitiably diseased that we can hardly hope for much else than a life of chronic invalidism, at least so far as this generation is concerned. The disease, if one may so speak, is intensely chronic. One thing is certain, we cannot make men moral by act of Congress. There is not one great general remedy. Everyone of us must take the matter up. The Kingdom of Heaven is within you. The influence of one, of each individual, steadily and patiently opposing the wrong will, in time, transform the whole. Every one of us has power; each one of us has been a sinner; each one may do little or much toward stemming the evil trend.

And first as to the endowers, whether individual or communal, let us preach incessantly and repetitively the truth that indiscriminate charity is unadulteratedly sinful and cruel. Every penny given without inquiry as to merit is simply hiring people to be sufferers. In a great civilized country, only last year, there was discovered to be a fiendish manufactory of cripples and victims to excite pity and secure alms from the "charitable." Children's eyes were gouged out and every bone in their bodies broken, in order, by their exposure, to stir up the sensibilities of the "kind-hearted," who, by their gifts, kept the manufactory "running on full time." Just as certainly does indiscriminate charity operate now, and here, and everywhere. God's command is infinitely stern, but it is just as infinitely compassionate, that in the sweat of the brow shall we *earn* our bread. The lives of East Indian ryots are quite as happy, fully as comfortable, and far more moral than those of an American mob of train-wrecking strikers; and yet the annual income of the ryot is not one-thirtieth of that of the striker.

Let it be clearly understood that there is to be no chilling of sympathy, no killing of kindness, no less giving, because of this law of life. There is to be all the more—but the sympathy is to be intellectualized, the kindness is to be made effective, and the giving is really to stop the suffering, and not increase it.

We must teach the rich that every endowment of hospitals and dispensaries must be conditioned, narrowly, rigidly conditioned, upon the law that only emergency-cases and the absolutely deserving poor are to be treated in hospitals. When importuned to contribute on hospital-Sundays, or to attend entertainments, charity-balls, etc., etc., let us refuse, and publicly refuse, unless the managers of such hospitals publicly state that rigid exclusion of those able to pay something for medical services is carefully and systematically assured.

[1] A remedy for the abuse of medical charity is offered by "A Young Subscriber" in a letter to the Medical Record. He suggests that the victim of this abuse "the next time and whenever he has need of a consultation, or has a patient to send to a specialist, avoid the man who daily robs him by indiscriminate dispensary-work, and pick out instead one who regards the rights of his fellows. There are men at the heads of dispensary-classes throughout the city enjoying large special practices, who boast that they have no care for the financial standing of their dispensary-cases so long as they furnish the required material for clinical purposes, and as for the complaining doctors they say, 'let them go and be blanked.' So long as they can do this and keep the support of the general practitioner, they will hold the same views. The moment they find it affecting their pockets they may at least cease to pride themselves upon their dirty treatment of their professional brethren. Let the non-dispensary men look to their rights, and they will soon have less wrongs."—[*Boston Med. and Surg. Journ., March 21, 1895.*]

The indiscriminateness of the doled-out charity of the hospitals is a natural result of the stupid indiscrimination of endowers. These pour out the money, year after year, and century after century, in reckless disregard of the laws of economics, of the real needs of the community, and of the experiences of other lands. Hospital-farms for epileptics, for the insane, homes for convalescents, homes for the dying, special hospitals of various kinds, especially for the tuberculous—these and more are pitifully wanted, and yet the old ways and the old evils are stupidly increased. If we could only have an omniscient or even half-wise Czar to direct almsgiving; if it were only someone's business to instruct people how to give their money. At present it depends either upon haphazard or upon the cunning wiles of some interested person. Rich plebeians, right versed as to oil, or beer, or dry goods, are made presidents or trustees, flattered to the top of their bent with the bauble of office and authority in the things of which they haven't even a spark or a glimpse of knowledge, all in order to wheedle endowments out of them. These go on building wings and additions to old evils, until, as with church-building, the historic momentum results in monstrous aggregations of multiform uselessness or abuse. And every day or two the daily newspaper-reporter gets hold of some scandal, a dying patient refused admission to hospitals, a fisticuff of rival visiting physicians, the "politics" of rival hospitals, etc., etc., and regales his readers with it. All the time the evil grows, until one of these fine days the donkey endower will suddenly awaken to a realization of the fact that he has been imposed upon, and that his ears are several inches longer than they should be. Then he will resign, shut up his pocket-book very tight, and genuine medical charities and properly conducted hospitals will suffer. To arouse the profession to the danger it is incurring by the abuses of medical charity, the danger of a sudden reaction whereby proper medical charity will be stopped, this has been the motive I have had in mind in writings upon this subject during the last six or eight years. It hardly needs the saying that one earnestly desiring the curing of a disease hardly wishes to kill the patient, yet some foolish folk affect to think that those who speak of the disease of the hospitals would destroy all hospitals as incurably diseased. The physician, even of the specialty Hospitalism, hardly desires to become a Reign-of-Terror guillotinist. Nothing is more divinely beautiful than a noble hospital, rightly managed, and illustrating at once the science, the art, and the benevolence of medicine. But, according to the old maxim, *corruptio optimi pessima*, and a hospital endowed by wealthy hypocrites, managed by medical advertisers, and filled by social parasites, is as bad as the other is good.

In the hospitals and dispensaries of England and Wales, 2,855,644 patients were treated in 1878, while in 1893 the number was almost four millions (3,985,263), an increase of noteworthy proportions. At the same time the number of physicians has, of course, also increased. In 1882 there was one medical man to 1703 people, whilst in 1893 there was one to every 1427—that is, each medical man has 250 less people in his *clientèle*. If this is true in England, where medical education and medical charity have preserved at least the tradition of sanity, what must it be in the United States? In order not to be charged with invidiousness, let us take the experience of a foreign institution. I assure you, however, illustrations could be had very much nearer home. St. Thomas' Hospital, of London, has an annual income of $285,000, and appeals urgently for more money. A writer in the *Medical Press and Circular* thus further describes the condition of this institution:

"That hospital was chartered by Edward VI, and splendidly endowed with landed estate, and up to the year 1862 it enjoyed a high reputation, and, so far as I know, did its work efficiently. In that year its site at London Bridge was invaded by the Southeastern Railway, and the hospital received, I think, $2,300,000 as compensation. That to the common mind would seem to be a tidy sum with which to build a new hospital, especially as the ground which it occupies was secured on the cheapest terms, having just been reclaimed by the Thames embankment, but when architects and builders got, as they did, a firm hold of the job, it turned out to be quite insufficient to realize their aspirations. They succeeded in producing not only a heavy deficit, but a veritable white elephant—a building about twice the necessary size, containing bed-accommodation one-third greater than could be maintained by the income of the institution, and constructed in every detail in the most expensive manner. It was stated by the royal prince at this meeting that five of the wards are now empty, there being no money to keep them full, but it was not mentioned by his royal highness that several other wards are filled by paying patients, most of whom are in no sense deserving of charitable relief, and ought to be in their own houses, nursed and treated at their own expense, and not at the expense of the charitable.

"It would not be just to blame the present administrators of the Hospital for the mad extravagance of their predecessors of thirty years ago, but for the financial administration of the Hospital at the present day they are responsible, and I may ask a question or two on that. I find from *Burdett's Annual* that every bed maintained costs $512.37 per annum, and every patient admitted represents an outlay of $38.83, the highest rate among the twenty-three London general hospitals save four. This does not mean that the sick patient costs directly any such sum, for, as far as I can make out from the figures, his maintenance, nursing, and treatment do not consume more than one-third of the amount, the remainder representing outlay in salaries to officials, pensions, and other matters which are only of indirect benefit, if at all, to the sick patient. When I find that the most efficient provincial, Scotch, and Irish hospitals can, and do keep, nurse, and treat a similar patient all told for just half the money, I am moved to ask what claim has St. Thomas' to public sympathy? Not all the royal princes, dukes, archbishops, and millionaires in existence will persuade me that a hospital which builds beyond its means, spends its resources like water, and refuses to retrench, deserves to be subsidized with $500,000 or any other sum."

As to the public, every one is a teacher, and may make his voice heard against indiscriminateness. I plainly tell my patients, and the occasion arises nearly every day, that they cannot get as good medical service at the free dispensary as at the private office, and that private treatment is far cheaper than the treatment for which nothing is paid. I think it our duty to stigmatize the hospitals and give them a bad name. We can hardly exaggerate the truth in this respect. Let us laugh to scorn the clap-trap delusion of the masses that at the dispensary they will be treated by the great Professor Bigwig, and that therefore they will be better treated

than by yesterday's graduate, Dr. Nobody. We, of course, know the silliness of such an illusion; we know that often at the hospital Bigwig gets all the honor and young Nobody does all the work. Ten to one, with his care and desire to establish a reputation, young Nobody would do the better work of the two, even if Bigwig had the case himself. Then there is the wasted time of the patient, the crowds, the shocking surroundings, the shame of being a pauper! Let us use the blunt, brutal word, and drive it into their heads—*hospitals and dispensaries are for paupers!* It will hurt a little, but it will do good. Every older physician has some younger friend and colleague who needs the poor patients and their poor fees. Why not do the patients and the friend a real service with one word of advice?

As to the profession, if one has anything to do with a hospital, one can do not a little in the interest of discrimination. A trained mind can learn to detect the old clothes put on for the visit, the odor of whisky, the concealment of ability to pay something. There should be no mincing of words with such folk. Every patient caught shamming should be half-insulted and unceremoniously turned out. Let them go to "other places where they will be welcomed;" the "other places" will thereby secure for themselves an evil name in time, which will prove a poor investment.

There is one half-evil that is condemned by some and practised by many, but it has the excuse that it is somewhat better than the hospital wholesale business. The drug-store doctor is not, perhaps, the best type of professional man, but he is not so bad as Professor Bigwig. By the drug-store doctor I do not mean the druggist who is not an M.D., but who in fact prescribes much as if he were. That problem is fast settling itself by the commercial medical college selling diplomas to the druggist. What is meant is the genuine doctor who also keeps a drug-store, but who charges—well, nothing for advice and everything for filling the prescription! Such a product of our *fin de siècle* medical civilization is in fact a direct reaction and result of indiscriminate medical charity. And since the doctor gets something, however roundabout, for his work, I am not inclined to scold him much. When hospitalism is whipped out of the field it will be time enough for all good men to turn in and run out the drug-store doctor.

Still another form the reaction has taken is that illustrated by the physician who, while pursuing essentially the same plan as the drug-store doctor, carries it out by the *vice versa* method. I mean the charging for advice but giving the medicine gratis. This is certainly a step, nay, two steps, in advance, and hits two heads well-deserved and good-resounding whacks with a single shillalah. Who does this at once "gets even" with the soulless hospital and with the nostrum-selling, prescribing druggist, both having tough skulls that need many downright doughty thwacks! Perhaps the same club may in time split wide open another cranium, that of the patent-medicine man. The remarkable progress in the arts of modern pharmacology make possible, and many other reasons make justifiable, the dispensing of one's own medicines.

In England medical clubs are already deemed unmitigated nuisances and deplorable grievances. With us they have not yet become so, but we are fast entering the same smooth *descensus averni*. But it seems to me even this phase of the wholesale medical business is preferable to hospitalism—a road, that if not to avernus, trends toward a lake into which certain tormented swine did once rush somewhat hastily, with much relief to their mental disease.

One finally asks why should each physician not have his own private dispensary? Behold his empty office and his unoccupied time! Why should he depersonalize his charitable work and give himself namelessly to an institution—a sort of a corporation which proverbially has neither a body to be abused nor a soul to be saved? Better it seems to me, and far better, would it be to do the service and get the gratitude one's self. In such cases there is a real and a scientific service on the physician's part, and a real and not a sham gratitude on the part of the patient. Private individuals should go into private competition with the hospitals. The hospitals can be whipped out every time. And when one corrects the botch-work of the hospitals, the time and the health of the patient have been so patently spared that the thank-offering of an unexpected and shyly given fee is much larger than one would have thought of receiving from a "charity-case." One may perhaps hear the sneer that it would be unprofessional for a hungering young doctor to solicit gratis-cases at his private office—and ten-to-one the sneer would come from one who hangs his name on big sign-boards from his dispensary-doors, and advertises himself or his hospital in cheap newspapers and on theater bulletin-boards. I would be far from justifying advertising ways on the part of the younger man, but decidedly when the advertisement of the hospital means the advertisement of the men running the hospital, then I excuse the young non-hospital advertiser first and quickest. When Bigwig quits the trickery, young Nobody will soon do so also.

I would like to add a suggestion that seems never to have occurred, either to our profession or to its most excellent co-working sister, that of the trained nurse. Thousands of women have heroically and successfully struggled under the greatest difficulties to secure their special training and ability. Thousands more are preparing, but already the profession is overcrowded. Why should they not take up the hospital-business as a work for which every consideration of natural and acquired fitness shows them adapted? The hospital-business is a sort of a special boarding-house business. I see no reason why in America we should drift into the huge barracks-hospital system with droves of daily thousands. The individualization of cases is the first requisite of clinical wisdom, and the individualization of hospitals is another professional desideratum. There might be hundreds of single-house hospitals or homes for the sick, adapted to different diseases, and to all purses, in all of our cities, in which nurses should be the responsible owners or controllers, and which any physician might upon regular business-arrangements send his patients, and relieve himself of all except the medical responsibilities, the nurse as now carrying out his orders. There is something belittling—I will not use a harsher word—in the custom of physicians going into the boarding-house business—euphuistically called the private hospital or the private sanitarium. The physician should not be interested in or bothered by the chambermaid's work, the price of beef, or the rental of rooms. This is all alien to his proper work, not seldom inimical to it,

and even leading sometimes to scandalous conditions. But placed in the hands of a woman specially educated for exactly that sort of thing, it would at once elevate the dignity of her own nurse's profession, lessen the shame of the impertinent and bulimic hospital, and regulate and systematize the physicians' proper labor.

But when all has been said and done the hospital-abuse will continue unless professional sentiment is aroused. Trustees, professional philanthropists, and the public will gladly continue to eat the oyster of medical service, and leave the shells to our asinarian rivalries. Possibly there will be no great and thorough cure of the evil so long as we remain a divided profession, so long as local medical societies never touch professional abuses and wrongs, so long as censors have no moral sense and are never incensed—surely not so long as the American Medical Association numbers as members but one in a hundred American medical men. As certainly also there will be no reform while like a lot of unspanked schoolboys the members of that Association hanker after and quarrel over the right to advertise nostrums and to associate with quacks, and while the cynical wrap themselves in the cloak of respectability, hold themselves aloof, and grin sardonically from the safe retreats of success. The two immediate and demanded conditions of all reform are:

1. That medical men shall have a large share in the government of hospitals, thus making them responsible for abuses and rendering it possible to stop this old monkey trick of getting chestnuts by our stupid professional paws thrust into the fire.

2. The principle of the Charity-organization Society must be made a part of all hospital-management. It would be well if a genuine copartnership could be realized between the local Charity-organization Society and every hospital. At least, there must be at every hospital an officer whose sole duty it shall be to discriminate between the worthy and unworthy—and he must be made to discriminate, too.

POSTSCRIPT.—From the *Lancet* of June 8, 1895, we learn that during the year 1894 there were treated gratuitously in the London hospitals:

GENERAL HOSPITALS:	
In-patients	52,080
In Convalescent Homes	5,585
Accidents and Emergencies	264,379
Out-patients, number of visits	1,684,448
SPECIAL HOSPITALS:	
In-patients	24,963
In Convalescent Homes	2,526
Accidents and Emergencies	25,660
Out-patients (visits)	1,205,688
COTTAGE HOSPITALS AND CONVALESCENT HOMES:	
In-patients	24,963
In Convalescent Homes	39
Accidents and Emergencies	244
Out-patients (visits)	13,858
DISPENSARIES:	
Out-patients	1,204,045
Totals	4,508,478

The *Lancet*, in pitifully begging for more funds to carry on this tremendous labor, notes that whereas in 1890 the total number of out-patient visits was 2,429,219, in 1894 the number has risen to the perfectly absurd figures of 4,108,039. What more convincing argument could be adduced for lessening the amount of subscriptions, and thus, perhaps, stopping this riotous debauchery of both profession and public?

CLINICAL MEMORANDUM.

A CASE OF HEMATIDROSIS COMBINED WITH CHROMIDROSIS.

BY ISADORE DYER, M.D,
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THE case herewith reported is interesting on account of the recurrent attacks of the disease and for the variety of the location of the separate eruptions.

The patient was a professional rubber in a local Turkish bath. He is twenty-six years old, an American, five feet eleven inches in height, and weighs 147.5 pounds. The patient called after his first eruption, but there was no evidence of the condition, and his healthy appearance and otherwise normal state made me somewhat skeptical of his statement. Two of the attendants employed at the same bath, however, fully confirmed his description of his first attack, and the details were interesting. Just after rubbing a patron of the bath one of the other attendants remarked that the patient was "sweating blood" between his shoulders, and wiped off the sweat with a towel. The towel was stained with the secretion. The sweating persisted for fully half an hour, leaving the skin reddened for quite an hour after that. The patient was advised to send for me as soon as another attack occurred, and also to note any untoward experience or sensation on his own part. Meantime it was ascertained that the father was subject to similar attacks in his youth. Neither father nor son, however, was a hemophile. The man himself was normal in every way. Although of a slender frame he was well made physically, and, on examination of his chest and heart, I found him perfectly normal. The urine showed no unusual evidence. Fully two weeks after the first attack I was called to the Turkish bath to see the patient in an acute attack. He had been exposed in the hot room of the bath, but had done no rubbing.

He was in no way distressed, except by his desire to hold the eruption for me to see. There was a marked scarlet eruption, involving the knee and the upper third of the right leg, arranged in a triangular manner with the base of the figure at the knee. The eruption was almost dense in its character, but here and there it was mottled. The appearance presented was that of an abraded skin, which on closer examination appeared to be, what it most likely was, a diffuse hemorrhage into the skin. There were absolutely no subjective symptoms, and there were no signs of swelling or of inflammation, simply the startling scarlet redness of the eruption. A sketch was rapidly made of the patch, which faded while this was being done. There had been no sweating with this eruption, but the patient assured me that the former attacks had been preceded and followed by just such an eruption. At the time I was called the

eruption had been present for an hour. It was fully an hour under observation, and the patient assured me subsequently that it lasted fully an hour after his leaving me.

In fading, the patches became broken, fading first in the center, until finally only the margins were apparent. Between the first attack and the one here described the patient informed me that he had had one on the chest.

Just nine days subsequent to the attack described the patient reported, with a two-ounce bottle filled with a fluid the color of ordinary carmine ink. This he stated had been collected from his back during an attack the night before, which had lasted longer than any of the preceding attacks, and which, for the first time, had left him weak and with pains in the joints. The fluid was examined by Dr. Pothier, the pathologist of Charity Hospital, and found to contain a mass of broken-down epithelial cells and fibers of cotton, stained red. There were no blood-corpuscles. Acids produced no reaction, and alkalies rendered the liquid colorless. Chemic agents, iron, etc., gave no reaction for blood. The staining of the fibers and the absence of blood-corpuscles or coloring-matter of the blood argued for a true chromidrosis. There was no suspicion of fraud on the part of the patient, and no occasion for it. Besides, the testimony of three other individuals who had witnessed the previous three attacks, and of one of these who twice had wiped off the sweat and had finally collected the fluid, must be considered reliable. Moreover, the patient did not wear colored underwear, but gray worsted and flannel mixed. The patient had been an attendant in the same bath for nearly a year, and seemed to have been affected in no other way by this new occupation. He had taken no drugs for an indefinitely long period preceding the eruptions. The change of occupation and the physical exertion incident to the rubbing at the bath seem alone to determine the cause of the eruption. The hereditary tendency might be remarked, but, of course, is to be qualified accordingly. The case is of some clinical interest from the sex and age of the patient, and from the concurrence of the two generally accepted reflex disturbances of the sweat-glands.

Under my advice the patient left the Turkish bath, and since changing his occupation to one of out-door life he has had no recurrence of the affection, although over two months have elapsed.

124 BARONNE STREET.

MEDICAL PROGRESS.

The Composition of Expired Air and its Effects upon Animal Life.—In an interesting communication presented at a recent meeting of the National Academy of Sciences, and a summary of which appears in *Science*, N. S., vol. i, No. 18, DRS. D. H. BERGEY, S. WEIR MITCHELL, and JOHN S. BILLINGS detail the results of an investigation into the composition of expired air and its effects upon animal life. It was found that the air expired by healthy mice, sparrows, rabbits, guinea-pigs, or men contains no peculiar organic matter that is poisonous to the animals mentioned (excluding man), or that tends to produce in these animals any special form of disease. The injurious effects of such air appeared to be due entirely to the diminution of oxygen or the increase of carbon dioxid or to a combination of these two factors. It seemed very improbable that the minute quantity of organic matter contained in the air expired from human lungs has any deleterious influence upon men who inhale it in crowded rooms, and hence it is probably unnecessary to take this factor into account in providing for the ventilation of such rooms.

In ordinary quiet respiration, no bacteria, epithelial scales, or particles of dead tissues are contained in the expired air. In the act of coughing or sneezing such organisms or particles may probably be thrown out.

The minute quantity of ammonia, or of combined nitrogen or other oxidizable matters found in the condensed moisture of human breath appears to be largely due to products of the decomposition of organic matter which is constantly going on in the mouth and pharynx.

The air in an inhabited room, such as the hospital-ward in which experiments were made, is contaminated from many sources besides the expired air of the occupants, and the most important of these contaminations are in the form of minute particles or dust, which often contains micro-organisms, including some of the bacteria which produce inflammation and suppuration, and it is probable that these are the only really dangerous elements in this air.

The experiments in which animals were compelled to breathe air vitiated by the products of either their own respiration or by those of other animals, or were injected with fluid condensed from expired air, make it improbable that there is any volatile poisonous matter in the air expired by healthy men and animals, other than carbonic acid. It does not necessarily follow that a man would not be injured by continuously living in an atmosphere containing 2 parts per 1000 of carbon dioxid and other products of respiration, cutaneous excretion, and of putrefactive decomposition of organic matters, because it is found that a mouse, a guinea-pig, or a rabbit seems to suffer no ill-effects from living under such conditions for several days, weeks, or months, but the evidence which has heretofore been supposed to demonstrate the evil effects of bad ventilation upon human health should be carefully scrutinized.

The effects of reduction of oxygen and increase of carbon dioxid, to a certain degree, appear to be the same in artificial mixtures of these gases as in air in which the change of proportion of the gases has been produced by respiration.

The effect of habit, which may enable an animal to live in an atmosphere in which by gradual change the proportion of oxygen has become so low and that of carbonic acid so high that a similar animal brought from fresh air into it dies almost instantly, has been observed before; but a continuance of this immunity produced by habit seems not to have been previously noted. Exceptionally such an immunity may either exist normally or be produced in certain mice, but the conditions upon which such a continuance of immunity depends are as yet unknown.

An excessively high or low temperature has a decided effect upon the production of asphyxia by diminution of oxygen and increase of carbon dioxid. At high temperatures the respiratory centers are affected when evaporation from the skin and mucous surfaces is checked by the air being satured with moisture; at low temperatures the consumption of oxygen increases, and the demand for it becomes more urgent.

The proportion of increase of carbon dioxid and of diminution of oxygen which has been found to exist in badly ventilated churches, schools, theaters, or barracks, is not sufficiently great to account satisfactorily for the great discomfort which these conditions produce in many persons; and there is no evidence to show that such an amount of change in the normal proportion of these gases has any influence on the increase of disease and death-rate which statistical evidence has shown to exist among persons living in crowded and unventilated rooms. It has been shown that the death-rate among soldiers is greater than among civilians of corresponding age, and that this difference is mainly due to diseases of the lungs occurring in soldiers in crowded and unventilated barracks. These observations have since been repeatedly confirmed by statistics derived from other armies, from prisons, and from the death-rates of persons engaged in different occupations, and in all cases tuberculous disease of the lungs and pneumonia are the diseases which are most prevalent among persons living and working in unventilated rooms, unless such persons are of the Jewish race.

But pulmonary tuberculosis and pneumonia are caused by specific bacteria, which, for the most part, gain access to the air-passages by adhering to particles of dust which are inhaled, and it is probable that the greater liability to these diseases among persons living in crowded and unventilated rooms is, to a large extent, due to the special liability of such rooms to become infected with the germs of these diseases. It is by no means demonstrated as yet that the only deleterious effect which the air of crowded barracks or tenement-house rooms, or of foul courts and narrow streets exerts upon the persons who breathe it, is due to the greater number of pathogenic micro-organisms in such localities. It is possible that such impure atmospheres may affect the vitality and the bactericidal powers of the cells and fluids of the upper air-passages with which they come in contact, and may thus predispose to infections the potential causes of which are almost everywhere present, and especially in the upper air-passages and in the alimentary canal of even the healthiest persons; but of this there is as yet no scientific evidence.

The discomfort produced by crowded, ill-ventilated rooms in persons not accustomed to them is not due to the excess of carbon dioxid, nor to bacteria, nor, in most cases, to dusts of any kind. The two great causes of such discomfort, though not the only ones, are excessive temperature and unpleasant odors. Such rooms as those referred to are generally overheated; the bodies of the occupants, and, at night, the usual means of illumination, contributing to this result.

The results of this investigation, taken in connection with the results of other recent researches, indicate that some of the theories upon which modern systems of ventilation are based are either without foundation or doubtful, and that the problem of securing comfort and health in inhabited rooms requires the consideration of the best methods of preventing or disposing of dusts of various kinds, of properly regulating temperature and moisture, and of preventing the entrance of poisonous gases like carbon dioxid, derived from heating and lighting apparatus, rather than upon simply diluting the air to a certain standard of proportion of carbonic acid present. It would be very unwise to conclude, from the facts given in this report, that the standards of air-supply for the ventilation of inhabited rooms now generally accepted are much too large under any circumstances, or that the differences in health and vigor between those who spend the greater part of their lives in the open air of the country hills and those who live in the city slums do not depend in any way upon the differences between the atmospheres of the two localities except as regards the number and character of micro-organisms.

The cause of the unpleasant, musty odor which is perceptible to most persons on passing from the outer air into a crowded, unventilated room is unknown. It may in part be due to volatile products of decomposition contained in the expired air of persons having decayed teeth, foul mouths, or certain disorders of the digestive apparatus, and it is due in part to volatile fatty acids produced from the excretions of the skin and from clothing soiled with such excretions. It may induce nausea and other disagreeable sensations in specially susceptible persons, but most men soon become accustomed to it and cease to notice it, as they will do with regard to the odor of a smoking-car or of a soap-factory after they have been for some time in the place. The direct and indirect effects of odors of various kinds upon the comfort, and, perhaps also, upon the health of men are more considerable than would be indicated by any tests now known for determining the nature and quantity of the matters which give rise to them.

Cases of fainting in crowded rooms usually occur in women, and are connected with defective respiratory action due to tight lacing or other causes.

Other causes of discomfort in rooms heated by furnaces or by steam are excessive dryness of the air and the presence of small quantities of carbon dioxid, of illuminating gas, and, possibly, of arsenic, derived from the coal used for heating.

Deciduoma Malignum.—BEACH (*Annals of Surgery*, vol. xxi, No. 5, p. 539) has reported a case of deciduoma malignum and cites another. From a study of these and the literature of the subject he arrives at the conclusion that deciduoma malignum is a distinct variety of malignant tumor, having histologic elements and a clinical evolution that are absolutely characteristic. This neoplasm has well-established etiologic relations with pregnancy, and often with hydatidiform moles. On account of the rapidity of its evolution it is of the greatest importance to make an early diagnosis. When once recognized, and if there seems to be no metastasis, immediate action is necessary, and a radical operation should be performed. The only rational operation is the total extirpation of the uterus with its appendages.

Perforation of the Uterus after Abortion, with Prolapse of the Intestine.—MANN (*American Journal of Obstetrics*, May, 1895, p. 603) has reported a case in which, following self-induced abortion by means of a catheter containing a stylet, the uterus was dilated and its contents removed with the aid of a curet. It was found that the uterus was perforated, and through the opening a portion of lacerated small intestine had found its way. Celiotomy was performed, hemorrhage controlled, and the lacerations repaired, and the patient made a rapid and uninterrupted recovery.

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HAS THE REVIVAL OF SYMPHYSIOTOMY PROVED A SUCCESS?

IT has been claimed that symphysiotomy never died out, and therefore cannot be said to have been revived. This is true in one sense, but the term revival does not require that actual death should have taken place, it simply indicates a change from a state of depression to one of activity. There was one operation in 1858, another in 1860, a third in 1863, and a fourth in 1864, under which there were 3 women lost. From 1863 to 1866 there was not an operation in any part of the world. This interval of three years applies especially to Italy, but it was far longer in many other countries. The last operation in Germany was in 1852, and in France in 1860. There was no symphysiotomy in Berlin from 1815 to 1892, and none in Paris from that of Baudelocque, in 1833, to that of Pinard in the Clinique Baudelocque in 1892. To advance from 12 operations in Italy in 1891 to 85 in thirteen countries in 1892, and 149 in fifteen countries in 1893, looks very much like a revival. This was properly an exodus from Italy, where it had been tested and improved for twenty-six years under two persevering obstetric surgeons. The real advance under antiseptic management in Naples began in 1886, and our record for Italy since then gives 56 cases, with 4 women and 8 children lost. Having been asked as to the credit of the chief operators, we say that Professor Morisani lost 1 child, but no woman, under 17 operations; Professor Novi lost 2 children, but no woman, out of 10 cases; and Dr. Mancusi lost neither mother nor child out of 6 cases, making 33 operations, with a loss of 3 children. Neapolitan operators lost 2 women and 6 children out of 45 cases. Bologna added to the mortality by 2 operations, which were both fatal; that city had 4 operations in all her history, all of which proved fatal.

We may divide the history of symphysiotomy into three periods: the first, from 1777 to 1864, inclusive; the second, from 1866 to 1892; and the third, since the exodus from Italy, in February, 1892. In the first period, of 87 years, it is believed there must have been 150 operations in seven countries, viz., France, Germany, Belgium, Holland, Spain, Italy, and England. Spain and England had but 1 each, and the record of cases that can be relied on shows that about one-third of the women and two-thirds of the children were lost. Under this discouraging record of mortality the second period was introduced in 1866 by Professor Ottavio Morisani, of Naples, who still lives to see the improvement of results that he inaugurated. In this period there were 106 operations, all in Italy, with 20 women and 16 children lost. The improvement under a rigid antiseptic technique is shown by the fact that under the last 38 operations (1886–1891) there were but 2 women lost, or 5⅓ per cent.; while the infantile mortality was 10⅔ per cent.

The knowledge of this greatly reduced death-rate in Italy, the operations being almost entirely in Naples, caused the exodus of February, 1892, when, after an interval of thirty-two years, Professor Adolphe Pinard reintroduced symphysiotomy into France. His success soon caused an extension of the work into other countries in the following order: Germany, Austria, Russia, United States, Denmark, Brazil, Ireland, Switzerland, Holland, Canada, and India, all in the year 1892. It will be noticed that although Ireland, Canada, and India introduced the operation, England declined to repeat her experiment of 1782 until a later period.

In the year 1891 there were 12 operations, all in Italy, and in 1892 there were 85 operations in thirteen countries. Of the 85 women delivered 10 died, and of the children 24 were lost.

In 1893 operations were performed in fifteen

countries to the number of 149, losing 19 women and 29 children.

In the United States there have been 75 operations, with a loss of 10 women and 18 children.

The best encouragement for the performance of symphysiotomy is to be found in certain centers where there have been many maternity cases in the hands of a few men. The Clinique Baudelocque has a staff of six obstetric surgeons, who up to December, 1894, had performed 48 operations, of which Professor Pinard had a credit of 25. He lost his ninth and seventeenth patients, or 8 per cent. of his cases, and the eighteenth child. The other five operators lost 2 women out of 23, and 3 of their children. The whole mortality is 8½ per cent., each, of the women and of the children. Professor Pinard says in his last report that of the 48 women 37 were "exclusively examined and cared for at the Clinique Baudelocque," and of these 37 only 1 died, and she of intestinal obstruction produced by a fibrous band; the children were all born alive.

In Professor Paul Zweifel's clinic, at Leipzig, there were 21 symphysiotomies in fifteen months prior to January 1, 1894. Of the 21 women Professor Zweifel operated on 18, and his three assistants on 1 each. No woman died and 4 children were lost; the children lost were delivered by the Professor.

The most encouraging work in symphysiotomy in the United States has been that of New York City, where 10 operators saved 19 out of 21 women, and 18 of their children. One of the 2 deaths was unvoidable, the patient being *in extremis* when brought to the hospital; the other died of sepsis due to the operation. It is fair to New York to count out the first case of Professor W. T. Lusk and give her 20 operations with 1 woman and 2 children lost, a mortality respectively of 5 and 10 per cent. There is much credited against this form of operation that is due to the prior condition of the patient, or to injuries produced in a hurried delivery of the fetus. There have been 80 deliveries in North America, with 10 women lost, and of these 10 only 4 can be fairly charged against the operation *per se*.

Symphysiotomy is an alternate of craniotomy, and not of Cesarean section, although the performance of the latter in preference may in exceptional cases become one of wisdom. In three such questions of choice in Philadelphia, Cesarean section was selected in two, and all of the women and children were saved. The limit of symphysiotomy is very marked in our country, and, as a rule, extends from a conjugata vera of 2¾ inches to one of 3¼ inches, when the pelvis is flat and the fetus of average size. But in the justo-minor pelvis, or when the fetus weighs from 9 to 12 pounds or more, the operation may be called for when the measure is 3½, 3¾, or even 4 inches. The average weight of male children delivered under symphysiotomy in the United States has been found to be $8\frac{7}{16}$ pounds, and of females $8\frac{1}{16}$ pounds; so that it is folly to limit the conjugate to a measure below 2¾ inches if the child is to be delivered either by the forceps or by version without its death. Thus far there has been too large a proportion of children lost in most countries, and attention should be specially directed toward the best method of delivering them alive.

Paris and London are in direct antagonism in regard to the choice between embryotomy and symphysiotomy. Professor Pinard advocates the abandonment of infantile destruction as a preparation for delivery, and hopes in the perfection of symphysiotomy to accomplish his purpose. London, voiced by Dr. Peter Horrocks and other Fellows of the Obstetrical Society, takes an entirely opposite ground, as shown by a discussion at the meeting of March 7, 1894. England prefers craniotomy to pubic section, and several Fellows claimed that there were less immediate and subsequent danger and disability after the Cesarean section than after symphysiotomy. There would be good reason for advocating this preference if English operators had the success of a Sänger or a Zweifel, but London Cesarean sections in the recent past have had a mortality of 38 per cent. in the women and 27 per cent. in the children; and as this is since January 1, 1886, it may be considered a fair estimate. Dr. Horrocks, to throw discredit upon symphysiotomy, made the following statement: "His own experience consisted in witnessing one case. His colleague, Dr. Galabin, operated. The pubes were brought together by means of a wire suture, but although both mother and child survived, the mother has never been able to do any work since, and was, he had heard, at the present time in an infirmary." On tracing up the patient after the Society meeting it was found that she and the baby were sound and well, but that she had had a mammary abscess; the case has not yet been reported, although more than a year has passed, and the state-

ment of Dr. Horrocks stands against it. The President of the London Obstetrical Society rated the mortality under symphysiotomy at 10 per cent., and thought that the Cesarean operation, when properly performed as to time and circumstances, would be attended with no greater loss. It is true that Professor Murdoch Cameron did save 27 out of 30 Cesarean subjects in Glasgow, but the general obstetric operators of England lost 16 out of 32 and 10 children. President Herman,[1] already quoted, had lost 4 women out of 7, and 3 children, and Dr. Cullingworth lost 3 women out of 5. Of 14 women operated upon "early," 5 died, or 36 per cent.; and of 4 operated on "prior to labor," 1 died, or 25 per cent. We fail to see what ground the Fellows of the Obstetrical Society of London have for claiming that they can save nine Cesarean women out of ten, even under conditions classified as "favorable." Our mortality in the United States is far greater than this, but in cases operated upon before labor, or early in it, our losses have been much lower than in England.

We look upon symphysiotomy in America as an established operation. We have no prejudices against it or in its favor. We do not object to repeating the operation on the same woman. We are opposed to craniotomy, not upon religious grounds, but because "it is a relic of barbarism," and we believe that the unborn fetus has a certain claim to live. When the pelvis of a woman is too small for delivery of a living fetus, as shown by a failure with the forceps under a fair trial, we believe in saving the fetus by a subosseous pubic section. If a woman can deliver herself when her children are small, or can be delivered by forceps, what is to be done when the fetus is a little too large for a natural or an instrumental delivery? England says perforate the head, as there is no danger to the mother; we say separate the symphysis, so that a living child may be delivered, and under such precautions that the mother shall run but a minimum measure of risk. We hope in time to reduce the mortality both in women and children by a better experience and by securing the patients in good season. We are opposed to experimenting with symphysiotomy in cases of rachitic dwarfs having a conjugate under measure, as the fetus is likely to be lost under version or forceps-pressure. In all doubtful cases of minimum measure it is safer to deliver under Cesarean section, performed early, and, better still, before labor has commenced.

[1] Dr. Herman has recently reported 11 operations, with 6 women lost; the cases having a favorable prognosis recovered.

THE PROPHYLAXIS OF TUBERCULOSIS.

SINCE the discovery of the tubercle-bacillus a rather warm contention has been waged about the precise importance that should be attached to this micro-organism in the etiology of tuberculosis. Those that at first denied the bacillus any other relation than that of mere accidental association with the tuberculous process have been gradually compelled to recede from their original extreme position, but they still maintain a fondness for their earlier views, and persist in ascribing a preponderant importance to the individual predisposition, and assume as a primary condition the existence of an undefinable morbid state favoring the lodgment and activity of the bacillus. On the other hand, it must be admitted that the extreme views of the ultra-bacteriologic school of pathologists have also undergone some modifications, so that micro-organisms are no longer considered the *sole* factors in the development of disease-processes. While it is universally conceded that there can be no tuberculosis without the tubercle-bacillus, it will not be denied that a certain deterioration of health, a certain lowering of physical vigor, a certain depreciation of the vital resistance, is a very important predisposing factor in the development of the disease—as of disease in general. It will thus be seen that there has taken place an approximation of extremes of view, a gradual harmonization of discordant opinions. The importance of a proper recognition of the relative significance of exciting and predisposing causes must be obvious, as upon it will depend the selection of the appropriate prophylactic measures to be instituted.

One of the most earnest and persistent advocates of the necessity of adopting means to prevent the dissemination of tuberculosis is CORNET, who has shown that the mortality from this disease has diminished directly as such prophylactic steps have been taken.

At a recent meeting of the Berlin Medical Society, CORNET (*Berliner klinische Wochenschrift*, 1895, No. 20, p. 430) took issue with the doctrine of the ubiquity of the tubercle-bacillus, with the resultant hopelessness of prophylactic measures directed against the micro-organism. Intra-peritoneal inoculation of guinea-pigs with dust obtained from open places as well as from apartments, even

when occupied by tuberculous patients, if care were taken in the disposition of the sputa, failed to give rise to infection. All of the evidence shows that the tubercle-bacillus is a strictly parasitic organism, finding outside of the human body only conditions unfavorable for its existence and development. Even at the temperature necessary for its growth, and in a suitable medium, it is soon displaced by the ordinary saprophytic organisms. The tubercle-bacillus adheres tenaciously to moist surfaces, so that the greatest danger is from drying of the expectoration and other discharges of tuberculous patients, and in the degree that this is prevented the dissemination of the disease can be restricted with almost mathematic accuracy.

The prevalence of tuberculosis is probably not so great as is usually conceived. Although responsible for a large number of deaths, it must be remembered that the disease has an average duration of about three years, and it is only during this time that it is capable of transmission by its victims. The proportion of cases of tuberculosis among the population is far less than that of the number of deaths from tuberculosis among the total mortality. It cannot, therefore, be said with truth that all persons live in the midst of tuberculosis.

Statistics show that the proportion of tuberculous patients varies very considerably at different periods of life. Thus between 5 and 10 years of age the proportion among males in Prussia is 1 to 2179; between 30 and 40, 1 to 94; and between 60 and 70, 1 to 43. These figures include all varieties of tuberculosis, some of which are little likely to transmit the disease. Under any circumstances the prevalence of tuberculosis is not so great as to preclude the possibility of good results from prophylactic measures. What can thus be accomplished is perhaps best illustrated by the comparative statistics of penal institutions, hospitals for the insane, and among the religious nursing orders of Prussia, in which for different periods attention has been given to the separation of the infected from the non-infected, and to the care and disinfection of the sputa.

Thus it appears that from 1881 to 1887 there occurred in the prisons of Prussia among every 10,000 living from 146.6 to 174.7 deaths from tuberculosis, and in Bavarian prisons from 158.9 to 184.1 deaths; while from 1892 to 1894 there occurred in Prussian prisons 81.2 deaths, and in 1892 in Bavarian prisons (in which prophylaxis was less efficiently carried out) 129.5 deaths. Similarly in Prussian hospitals for the insane there occurred from 1881 to 1887 between 180.8 and 198.5 deaths from tuberculosis per 10,000 living, and in Bavarian hospitals from 200.4 to 224.7 deaths per 10,000 living; while in 1891 there occurred in the former 156, and in 1891–92 in the latter 201.3 deaths per 10,000 living.

Among the religious nursing orders in Prussia, while there occurred in 1881–82 among every 10,000 living 114 deaths from tuberculosis, there occurred in 1893–94 but 67 deaths in the same number. These figures clearly show a diminishing mortality from tuberculosis, after the adoption of the most simple prophylactic measures. Between 1875 and 1887 the general mortality from tuberculosis in Prussia averaged about 31 deaths among every 10,000 living. From the year 1887 there has been a gradual decline to 25 per 10,000 in the year 1893. A similar reduction has taken place in Hamburg, where also prophylactic measures were actively carried out. As compared with other parts of Germany and with Austria, where such measures have been neglected, or were only undertaken late, the contrast is most striking. That the improvement is not due to other factors is shown by the fact that similar improvement has not been observed elsewhere, where corresponding prophylactic measures have not been adopted.

The obvious inference from all of the facts is, that whatever, and to what degree, other influences play a part in the etiology of tuberculosis, none is so definite and none so directly open to attack as the tubercle-bacillus, and it thus becomes the serious duty of the medical profession to avail itself of every means likely to prevent the dissemination of this deadly parasite.

EDITORIAL COMMENTS.

The Significance of Calcium in Diabetes Mellitus.—That glycosuria sometimes results from disease at the base of the brain and in the sequence of profound lesions of the pancreas has been definitely established, but this condition is wanting in many of the symptoms of diabetes mellitus. In conjunction with the presence of glucose in the urine the most marked manifestations of true diabetes relate to the nutrition, and it seems a justifiable inference that there exists a profound disturbance of the bodily metabolism. An interesting confirmation of this view is afforded by the report by GRUBE (*Münchener medicinische Wochenschrift*, 1895, No. 21, p. 487) of a case of diabetes in a man, twenty-five years old, a brother of whom had died of diabetes, and who, upon the sugges-

tion of an acquaintance, took daily a teaspoonful of powdered egg-shells, with the result of a notable gain in weight and freedom from troublesome symptoms, although the amount of urine and the proportion of sugar were not diminished. Upon the basis of this observation a combination of calcium carbonate and calcium phosphate in the proportions found in egg-shells was administered in quantities of sixty grains daily, and the improvement was maintained. It has been pointed out that the phosphates are eliminated by the kidneys, and by the bowel in diminished quantity, in diabetes, and that, besides, diabetic patients receive a deficiency of calcium in their diet. The question is raised whether or not the profound nutritive changes of the disease may not in part be attributed to this condition. Increase in weight was also observed in the sequence of the administration of powdered egg-shell in a case of diabetes in a man, thirty years old, whose father, brother, and sister had died of diabetes. Similar improvement also took place in a third diabetic, forty-one years old, to whom was administered a combination of calcium carbonate and calcium phosphate. Observers have shown that fasting persons excrete an excess of lime, and so do patients suffering with osteomalacia. In the last-named condition and in diabetes the alkalinity of the blood is diminished, and this may lead to a breaking up of calcium combinations in the body. Further, a clinical connection between these two affections has been observed by a number of authorities. In the first of the cases here related the patient complained of pains in the tibia, and the question is raised whether or not these bore any relation to the increased excretion of calcium.

Well Done!—Prior to the Commencement-week of the Pennsylvania University medical men were somewhat puzzled to know who was a certain Dr. E. Grewer, whom the Philadelphia newspapers, with customary discretion, were all saying would deliver the "toast of welcome" at the anniversary of the class of '74. One wondered who this seemingly very important personage was. At last it was noticed that the gentleman was a "Lost-Manhood-Restored" newspaper advertiser, and then the mystery and the newspaper enthusiasm were explained. In view of the publicity of the announcement we think it but just to make public the fact that by the inadvertence of the secretary of the class, the doctor, "whose specialties are Chronic, Nervous, Skin, Heart, Womb, and Blood Diseases," who had been allowed to subscribe, and to whom a badge had been given, was finally not permitted to appear as a member of the class. His badge was reclaimed and his money refunded.

Medical Advertisements in Lay Publications.—We are glad to hear of yet another publication that exercises a censorship over the advertisements offered it. This is the *Ladies' Home Journal*, which declines to accept paid announcements of a "medical, remedial, or curative nature," even including plasters, from an unwillingness to assume even implied sponsorship for anything that might be in the slightest degree improperly suggestive, or that, used by the ignorant or uninformed, might be capable of physical harm. That this policy—even if nothing more than politic—has been well chosen, is shown by the fact that the *Journal* has an enormous circulation among the best people, and is altogether a most successful and profitable enterprise. At this time, when all forms of quackery find ready prey in the credulous and the ignorant, it is gratifying to realize that there are still individuals and concerns whose ethical sense is not subservient to pecuniary considerations, and that their action is sustained by a large constituency.

The Sterilized Milk and Ice Society of Philadelphia has resumed the good work begun last summer, having already opened two depots for the sale at cost of milk, sterilized, modified and pure, and ice. One of these depots is at the main office and sterilizing plant of the society, at Hope and Dauphin Streets, the other at Fifth and Bainbridge Streets, in the heart of the slums. Other depots will be opened as soon as sufficient contributions have been received. The work of this organization is in the highest degree philanthropic and life-saving. Upon the one hand it does not pauperize the beneficiaries of its activity, while on the other hand it places within the reach of the poor, and particularly the children of the poor, a most important—in fact an indispensable—article of food, properly prepared and preserved. This good work should receive the cordialy smpathy and substantial support of the whole community.

SELECTIONS.

PHYSICAL TRAINING *vs.* ATHLETICISM.

IT is certainly gratifying to me, in recalling the experiences which I have undergone in the last fifteen years, fighting the questionable tendencies of athletics, at first almost single-handed, to hear the comments I have listened to this evening. For a long time I have thought the medical profession was a little bit benighted on this question. To me physical training is nothing but applied physical hygiene. I have given suggestions and hints to that end to the young men who have come under my observation. Unfortunately for the cause of physical training, this subject of athletics has assumed undue importance. No doubt our colleges have allowed this subject to assume a bias in the wrong direction. They have encouraged the spectacular and sporting side of the subject and almost ignored the hygienic and educational aspect. They have nursed and fostered the highest grade of scholarship and extreme athleticism. These are incompatible in the same individuals; therefore, the athletes and scholars are contending for fame in opposite directions—one class is striving for distinction by the supreme efforts of the mind and the other class by the supreme efforts of the body; and in my opinion neither class is doing what it ought for the advancement of education in its broadest and noblest sense.

It seems to me time to return to the old Greek idea of unity in development, unity in education, and to take a rational view of the claims of both body and mind, and educate them both together. I see no way of doing this but by recognizing physical training, and putting it on the same footing as any other department in college. When we consider one or two phases of this whole movement, to me it is simply shameful. Harvard and

Yale to-day are each spending over $50,000 a year, and employing thirty men, to bring fifty stalwart fellows into condition to meet their foremost rival. On the other hand, the departments of physical training in each institution are spending one-fifth of that sum, and have one-fifth that number of men, to look after the physical training of the remaining students—98 per cent., or about 3000, at Harvard University. Now the absurdity of this position is only paralleled by assuming that some few well-chosen speakers should be selected and trained for the rhetorical contests, and the rest of the students be excused in order that they might attend the rehearsals and applaud the progress of their companions. It seems to me that this is radically wrong. In making this assertion I want to remove from your minds, however, the idea that there is any institution in this country that is carrying physical training to excess. If you could have an opportunity of meeting all of these men as they come to the colleges from the preparatory schools, see them in a state of nature, how impoverished they are—with poorly developed chests, crooked spines, and emaciated limbs—you certainly would not consider that physical training was being carried to excess. In fact, I invite you to come to Harvard and look over the photographs of these men, and I think you will be prepared to meet the arguments that physical training is being carried to excess in any of our institutions. On the other hand, our scholarly men are suffering for the need of systematic physical exercise, and the majority of our students at the present time do not show permanent signs of gain. Until our scholarly men are encouraged to attend the gymnasium in view of aiding their mental development, and not consider it, as many do, something detrimental to the best intellectual efforts, and when the majority of students can show improvement in their physique, it seems to me it will be time to talk about an excess of physical training. It is a misfortune to have an athletic question and a physical-training question coupled together in the minds of our people. It seems to me the thing for us to do who are interested in the physical welfare of students is to use our utmost effort in the direction of staying the tide of this concentrated athleticism, and try to give to the masses something of the time and the energy now devoted to the special training of the favored few.—DR. SARGENT, of Harvard College, *Boston Med. and Surg. Journ.*, June 6, 1895.

A NEW PHASE OF MEDICAL CHARITY.

AT a recent anniversary of one of the large and needy hospitals in the millionaire districts of this city a speaker filled with enthusiasm for the benefits of the present hospital-system is reported to have said that one of its greatest boons was the saving of expense to the rich man. In proof of such an unjust and outrageous claim he bolstered his statement by comparing the items of expense when a patient was treated at an ordinary hotel by his regular medical attendant with those in a well-equipped charity-institution supported by the liberal contributions of a Christian organization. Instead of a daily expenditure of $5 for hotel-accommodations, $5 for a trained nurse, $5 per visit for the physician, and $5 more for the board of the nurse, not to speak of the cost of the medicines from an expensive pharmacy, the patient who entered the hospital in question needed only to pay for his board and a private room. All other outlays were unnecessary and were included in the one item named. Naturally in this connection we think of the physician, who is the only one whose services are virtually considered of no account. The high price of the room added to the donations of the charitable enable the hospital to make a handsome profit, even including the general expenses for nurses, medicines, instruments, and dressings. The attending physician or surgeon, who might be looked upon as the real personage who makes any hospital what it is, is not only entirely ignored, but a deliberate attempt is made to swindle him and his outside associates in attempts at gaining a legitimate livelihood. It would appear from all this that the evolution of medical charity is distinctly in the direction of eliminating the doctor. Another step in this direction would be for hospital-managers to go into the wholesale proprietary-medicine business and prescribe remedies on their own account free of cost to the patients. Why should not money be invested as well and as profitably in medical charities and millionaire clinics, as in railroads, wheat, and mining stock? The men who run the hospitals can command all the needful capital on the hypocritical plea of charity to the poor, can obtain medical services free, can build magnificent edifices, endow beds for cast-off servants, beg for church-subscriptions, and what is now to hinder them from running the medical-charity business entirely in their own interests? They are doing it all the time, though less openly than the distinguished speaker in question has so frankly admitted.—*Medical Record*, June 1, 1895.

REVIEWS.

SYSTEM OF SURGERY. Edited by FREDERIC S. DENNIS, M.D., Professor of the Principles and Practice of Surgery, Bellevue Hospital Medical College, etc., etc., assisted by JOHN S. BILLINGS, M.D., LL.D., Edinburgh and Harvard; D.C.L. Oxon.; Deputy Surgeon-General U.S.A. Vol. I. The History of Surgery, Pathology, Bacteriology, Infections, Anesthesia, Fractures and Dislocations, Operative Surgery. Profusely illustrated. 8vo., pp. 880. Philadelphia: Lea Brothers & Co., 1895.

As this wonderful century draws toward its close the activity of bookmaking seems rather to wax than to wane. It could hardly be otherwise, with the steady progress of modern research and the changes thereby wrought in surgical theory and practice. The surgery of to-day is not the surgery of twenty years ago. Yet, although the teachings of the earlier time are so largely set aside and the practice so modified, there remains intact what may be called a body of surgery (as the older theologians were fond of speaking of a body of divinity) which is based upon observation and experience. Only in interpretation of phenomena, by the better light we have, do we differ from those who went before us.

The *System of Surgery*, the first volume of which we have now to notice, has among its contributors some of the most prominent surgeons and surgical pathologists of the present time, and may be expected to set forth the latest aspects of the science and the art.

By way of introduction, there is a chapter by Dr. J. S. Billings on the History and Literature of Surgery. It is rather a catalogue *raisonné* of surgeons and surgical writings, than an account of the development and progress of the science and art. As Macaulay said: "What is told in the fullest and most accurate annals bears an infinitely small proportion to what is suppressed. No history can present us with the whole truth; but those are the best histories which exhibit such parts of the truth as most nearly produce the effect of the whole." Dr. Billings was, of course, hampered by the necessary limits of the space assigned him, and his work had to be somewhat of the nature of a compilation.

Of the remaining eleven articles there are three which belong wholly to the present period. These are: One on Surgical Pathology, including inflammation and the repair of wounds, by Professor Councilman, of the Harvard Medical School; another on the General Bacteriology of Surgical Infections, by Professor Welch, of the Johns Hopkins University; and one by Professor Gerster, of the New York Polyclinic, on the Technique of Antiseptic and Aseptic Surgery. The two former are of exceeding interest. We think they would have been available to a larger class of readers if the authors had entered more into the elementary details of the subjects. Many terms are used and many processes mentioned which must be wholly meaningless except to those who have either had training in bacteriology or have at hand other sources of information. Professor Gerster's article is not open to this objection. It is both full and practical. We note that he says (p. 712) that the ordinary wearing apparel of surgeons and nurses "notoriously contains large quantities of dust and dirt," and must be doffed before proceeding to an operation. Would it not be better that surgeons and nurses should avoid this necessity by frequent changes and by special care in the cleansing of their garments? A condition so easily corrected ought not to be allowed to be habitual.

Four of the articles in this volume are devoted to what may be called surgical diseases. Professor Nancrede, of Detroit, discusses the Symptoms, Diagnosis, and Treatment of Inflammation, Abscess, Ulcer, and Gangrene; introducing also under this head, as it seems to us somewhat oddly, Burns and Scalds, Wounds, Traumatic Delirium, Traumatic Hysteria, Hemorrhage, and Hemophilia. The subject of Shock, very casually noticed in two of the other articles, is, we think, of sufficient moment to have had much fuller discussion.

Septicemia, Pyemia, and Poisoned Wounds are treated by Professor Carmalt, of New Haven; Traumatic Fever, Erysipelas, and Tetanus, by Professor Warren, of the Harvard Medical School; Rabies, by Professor Biggs, of the Bellevue Hospital Medical College. All of these articles are interesting, but would be more valuable to the general reader if they were in greater detail.

There remain four chapters on subjects belonging to what we call practical surgery. Professor Conner, of Cincinnati, has contributed one on Gunshot Wounds, which is up to date. We note that on p. 541 he says that a bit of cloth, carried in along with a ball, "if left in place is certain to be a source of infection." With this we quite agree; but on p. 455 he says "if the bit of cloth is not removed or spontaneously extruded, it may be encapsulated and thus rendered harmless."

Fractures and Dislocations are discussed, but very briefly and in general terms, by the editor, Professor Dennis. We can hardly think that this article fairly represents the practice of New York surgeons of to-day; if it does, they are behind those of Philadelphia. We are told (p. 545) that in fractures of the leg, "if the surgeon prefers a splint instead of the plaster-of-Paris bandage, the classical double-inclined plane of McIntyre is one in common use." We have never seen this splint employed in the United States; but we have seen fractures of the leg treated with apparatus on the same principle, with lamentable results. On p. 548, Salter's swing is represented and commended; but there are several far cheaper, better, and simpler forms of apparatus for the same purpose in use in this country.

The chapter on Anesthesia, by Professor H. C. Wood, deals with the subject wholly from the standpoint of a laboratory student, and not from that of a clinical observer. A very large experience with the various agents in the operating theater has convinced us that experiments on animals afford very unreliable data as to the effect of anesthetics upon the human subject; and there are many practical points which have forced themselves upon our attention to which Professor Wood makes no allusion. Not a word is said as to local anesthesia in either of its forms.

The volume concludes with an article on Operative Surgery by Professor Stephen Smith, of New York. This author is well known in connection with this special subject, and we need only say that his present work is in keeping with that which he has done in the past.

Any work on General Surgery, offered to the profession at the present time, must encounter comparison with formidable rivals already in possession of the field. The one before us has the advantage of able authorship, and is one of very attractive appearance, with clear type, good paper, excellent illustrations, and convenient size. We predict for it an abundant success, but not as a text-book or as adapted for the common run of readers. In a second edition it seems to us that matter might be added in a convenient form which would enable even the less advanced to avail themselves of the mass of information contained in it.

TWENTIETH CENTURY PRACTICE. An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D., New York City. In twenty volumes. Volume II. Nutritive Disorders. New York: William Wood & Co., 1895.

THE second volume of this prompt-appearing work is devoted, so it is somewhat strangely said, to "nutritive disorders," by which we will charitably suppose is meant the disorders of nutrition. The 739 pages are made up as follows:

Addison's Disease and Other Diseases of the Adrenal Bodies, by Sir Dyce Duckworth, of London, 31 pages.

Diabetes Mellitus, by Carl Von Noorden, of Frankfort, 154 pages.

Rheumatism, by T. J. Maclagan, of London, 143 pages.

Gout, by Henry M. Lyman, of Chicago, 182 pages.

Arthritis Deformans, by A. E. Garrod, 64 pages.

Diseases of the Muscles, by Dujardin-Beaumetz, of Paris, 48 pages.

Obesity, by M. J. Oertel, of Munich, 103 pages.

A good index of thirteen pages should be mentioned, and while upon the subject, we beg the publishers, with the completion of the work, not to fail to add a thorough general index of the entire twenty volumes.

We do not wish to seem or to be hypercritical, but, whether owing to the fact that many of the original writers of this volume were using a foreign language, or whether their articles were carelessly translated, there occur entirely too many ungrammatic and inelegant expressions. Such expressions as "a certain diagnosis can be arrived at," "the following was one that have come under my notice," are to be found on nearly every page of certain articles. Some sentences become almost an unintelligible jumble of words. For example, and by no means the worst:

"The theory which regards arthritis deformans as a mixed disease resulting from the blending of rheumatism and gout, which is identified with the name, and supported by the great authority of Jonathan Hutchinson, is intimately mixed up with the hypothesis of the existence of an arthritic diathesis which serves as a basis upon which rheumatism and gout and also articular disorders of other kinds may be developed."

Here is a complete—supposably complete—sentence separated from all others by periods: "And in the first place whether it is a primary or a secondary myositis—usually a matter of but little difficulty."

Throughout the work one sees manifold illustrations of the common blunder as to the use of the terms *case* and *patient*. How in the name of nomenclature can "a case" be "removed," or be "brought in," or be "seen." A *case* is a single instance or example of disease, the history or report of a *patient's* disease, treatment, etc.

We cannot help asking: If *anæmia* and *hæmophilia* and *dysmenorrhœa*, why, then, not also, *encyclopœdia* and *gangræne* and *hæmorrhage?*

Other common blunders that should not have occurred in an encyclopedic work are the misuse of *should* and *ought*, and, worse yet, the misuse of *where* and *when*. "Where greater heat is called for," is an example. It is here not a question of location or position but of time, and *when* is the word that should have been used.

Lastly, we would suggest to the proof-reader an hour's diligent study of Teall's excellent little book on *The Compounding of English Words*.

As to any extended criticism of the scientific character of the contributions, neither our space nor our ability will much permit. However, we cannot forbear another allusion to a "twentieth-century" discrepancy. We very much fear that a decidedly nineteenth-century mistake has been made in not securing, in all cases, twentieth-century contributors, *i. e.*, men whose "*floruits*" will be placed at any rate in the early decades of that period. The first volume, with the exception of two or three important articles, was written by the old-time nineteenth-century favorites, who have turned up for years with praiseworthy regularity in all new enterprises, but who are in reality veterans of the past, in whose vessels no twentieth-century sap will ever run. The second volume shows a most lamentable lack of editorial discretion. Why, in the name of Duchenne, of Cruveilhier, of Erb, and of many others, was the selection made of that dear old therapeutic optimist—peace to his ashes!—Dujardin-Beaumetz, to write upon such a twentieth-century subject as diseases of the muscles? Where, dear editor, were some of your New York colleagues? It is really too aggravating, when one thinks of the scores of available men who in Europe and America have been at work on this important subject. The bibliography given after the section is—well, not twentieth-century! but what one might expect under the circumstances.

But the worst "chestnut" in Vol. II is the elaborate but disjointed article on rheumatism by Dr. Maclagan, of London. That he was the author of a special work on the subject (1881) should have been sufficient to disqualify him, deserving well, though he does, at our hands for his strong advocacy of salicin. What will the teachers of the year 1900 say of the eight pages on the miasmatic theory of rheumatism? What will the more intelligent of them say *now?* We do not know Dr. Maclagan; we do not even know his age, but he lives in thought away back in the fifties, and is a mental contemporary of J. K. Mitchell, the elder Pepper, and Sir Henry Holland. The article of von Noorden on Diabetes saves Vol. II from mediocrity.

They manage these things better in France. The *Traité de Medecine*, recently completed, was edited by nineteenth-century men, but it was *written*, almost every page of it, by young twentieth-century men. But there is yet time, and the list of coming contributors gives definite promise of it, that in the succeeding volumes the shadow of a great event, so loudly but as yet in great part so falsely, proclaimed in the title, may fall on the series.

SOCIETY PROCEEDINGS.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS.

Ninth Annual Meeting, Held at Niagara Falls, May 28 and 29, 1895.

FIRST DAY—MAY 28TH.

DR. L. BOLTON BANGS, of New York, read a paper entitled

TUBERCULOSIS AND NEOPLASMS OF THE BLADDER: SURGERY OR HYGIENE?

He reported three cases of tuberculosis of the bladder, which he stated were typical of many, and in which the hygienic treatment was followed by very beneficial results. He stated that among the many troublesome cases of disease of the bladder that we are called upon to treat, none is more difficult than those due to tuberculous infection. At first the symptoms in these cases are often obscure and so similar to those produced by other morbid conditions that the diagnosis is frequently doubtful, and in many even impossible. Later on the clinical picture becomes so characteristic that all doubt as to the diagnosis is removed. But at this stage treatment can effect but little, even in the mitigation of the sufferings of these patients, whose hope of cure is now out of the question. If, however, the disease can be discovered in its incipiency, and proper measures taken for its relief, it may be regarded as curable, certainly in the sense of being held in abeyance. Vitalization of tissue is what these patients need, and they require at least two years of good hygienic residence

in a temperate climate; and besides climate they need occupation, for *ennui* seems to be almost as deteriorating as confinement to the house.

Surgical traumatism produced by overzealous efforts to relieve local symptoms seems to result in more harm than good. Such efforts are likely to put the unhappy patient still further below par and facilitate the development of other tuberculous foci, either in the same organ or in one more distant.

Dr. Bangs also reported three cases of malignant disease of the bladder, in which he stated that a cure also depends upon an early diagnosis. Unfortunately, in these cases many of the early symptoms are overlooked, or, if appreciated, are misunderstood. The patients themselves, because of the insidious onset of the disease, become accustomed to their first symptoms, and usually do not seek the advice of a medical attendant until the affection is well advanced. In conclusion, he stated that he has contrasted these two groups in order to present for discussion the points (1) that cases of incipient tuberculosis of the bladder should be subjected to hygienic rather than to surgical treatment, and (2) that in the incipient stages of neoplasms surgical treatment of the most radical kind should be instituted.

DR. JOHN P. BRYSON, of St. Louis, said he was entirely in accord with the statements made by Dr. Bangs regarding the treatment of the tuberculous cases. In tuberculous cystitis perineal drainage is not to be recommended. In two of his cases the perineal wound became infected and failed to heal. The suprapubic route is altogether to be preferred when drainage is to be resorted to. In cases of vesical neoplasms the symptoms frequently come on late. If the new-growth is situated toward the fundus, or at any considerable distance away from the vesical outlet, there is no reason why we should get any symptoms of its existence for a considerable length of time, and the first symptom is likely to be hemorrhage.

DR. GARDNER W. ALLEN, of Boston, reported a case of tuberculosis of the bladder in which the symptoms entirely disappeared under hygienic treatment.

DR. BRANSFORD LEWIS, of St. Louis, referred to a case of tuberculous cystitis in a farmer who had lived for several years on a farm in Kansas. He came to St. Louis, and there, under supporting treatment, rest, creosote, and cod-liver oil, the urine, which had been cloudy for three years, cleared up, and the man gained about twenty pounds in weight in three months.

DR. BRYSON said that as far as the internal treatment of these cases is concerned he has derived much benefit from the use of the simple hypophosphites. Cod-liver oil has not been particularly serviceable. He has seen no benefit from preparations of malt, and creosote has not in any way helped his patients. The climate of southern California seems to be particularly beneficial to these patients.

DR. EUGENE FULLER, of New York, said that he agreed that hygiene is the most important factor in the treatment of these cases. Many people are so situated, however, that they cannot change their residence, and then other sustaining measures are called for.

DR. GEORGE CHISMORE, of San Francisco, expressed the opinion that the pain complained of by these patients is frequently due to the methods of search employed in endeavoring to discover the cause of the trouble. As a routine treatment, washing of the bladder is certainly not to be recommended, particularly in tuberculous cases. He agreed that early operation in cases of malignant growths of the bladder does not always effect a permanent cure.

DR. WILLIAM K. OTIS, of New York, read a paper on

HEMATURIA.

After describing various chemic tests for the presence of blood in the urine, he stated that when the existence of hematuria has been definitely determined, the next important step is to ascertain in what portion of the urinary tract the lesion is situated. When the source of the hemorrhage is situated in the anterior urethra, between the meatus and the compressor urethræ muscle, and the blood is sufficient in amount, it will exude from the meatus, or may be pressed out by stripping the urethra with the finger. If the urine is passed in two portions, the first only will contain blood. When the hemorrhage takes place from the posterior urethra, between the compressor urethræ muscle and the internal sphincter of the bladder, the blood will not exude from the meatus, and if it is sufficiently large in amount the pressure will overcome the less resistance of the internal sphincter, and the blood will flow back into the bladder, making it difficult to decide whether its source is from the bladder or from the posterior urethra. In most of the cases, when the bleeding proceeds from the posterior urethra, there is considerable urgency in urination, although occasionally this symptom is absent.

When the seat of hemorrhage is within the bladder the entire urine therein contained will be intimately mixed with the blood, and if the hemorrhage is profuse, clots may form, which have a certain diagnostic significance if they are too large to pass through the ureters. Some consider the color of the urine an indication of the origin of hemorrhage; but this varies so greatly under different conditions, that it is unreliable, and of but little value in arriving at a diagnosis. Microscopic examination of the urine may show evidences of the presence of some new-growth in the bladder, while, on the other hand, the detection of casts containing blood-corpuscles indicates that the lesion is in the kidney. Should an examination of the urine fail to locate the source of the bleeding, we may proceed to the direct examination of the bladder itself, by carefully washing out the organ through a woven catheter by means of a hand-syringe, and then a few ounces of clear fluid may be introduced and the catheter withdrawn just far enough to prevent the fluid from escaping; after a few moments the catheter is reintroduced, and if the fluid returns mixed with blood the hemorrhage is probably vesical in origin.

The resorption-test, made by introducing a solution of potassium iodid into the bladder, and shortly afterward testing the saliva for free iodin, is also extremely valuable and satisfactory for the purpose of determining if the lesion exists within the bladder. When the bladder is the seat of a new-growth, its presence may be determined by bimanual palpation with one finger in the rectum or by examination with an ordinary searcher or sound. The value of an examination with the electrocystoscope, in cases of hematuria in which the diagnosis is difficult, can scarcely be overestimated. By its aid

we are able not only to locate with exactness the portion of the bladder from which the hemorrhage emanates, but also to determine the cause and extent of the lesion.

In locating hemorrhage from the kidney the clinical symptoms, physical signs, and previous history of the patient are usually of great value, although hemorrhages occasionally occur from that source without the slightest warning and without other symptoms. As a rule, however, symptoms are present that point to the kidney as the seat of the difficulty. If the kidney is the seat of a malignant growth, an increase in its size can often be ascertained by bimanual palpation, while pressure over the affected region will usually produce a sensation of pain or sensitiveness if renal calculus is present. Lastly, if for any reason it has been impossible to locate the lesion, and at the same time the bladder appears to be its most probable seat, it is perfectly allowable to perform an exploratory suprapubic section, especially if the hemorrhage is severe or has been of long duration.

DR. W. F. GLENN, of Nashville, said that by means of the Leiter cystoscope and the Otis urethroscope we can often make out with certainty whether the bleeding comes from urethra, bladder, or kidney.

DR. BRYSON said that while he was inclined to agree with the last statement, we still need an instrument that will enable us to get a good view of the vesical outlet. He also called attention to the possibility of determining the source of pyuria of renal origin by means of the cystoscope.

DR. EDWARD R. PALMER, of Louisville, said he has had no trouble in getting a view of the neck of the bladder, for which purpose he employs a long Klotz tube (Nos. 24–26) and the Otis instrument lamp.

DR. ABNER POST, of Boston, stated that some doubts have arisen in his mind as to the accuracy of the resorption-test. In one case coming under his observation, a dram of the tincture of opium injected into a man's bladder produced entirely different results on different occasions.

DR. R. W. TAYLOR asked Dr. Palmer whether he has not found that the introduction of large instruments into the posterior urethra is likely to give rise to epididymitis?

DR. PALMER replied that he has never seen any untoward results follow the introduction of the long Klotz tube.

DR. OTIS, in closing the discussion, said he agreed that in cystoscopy we are not able to get a good view of the internal urethral orifice. He regards the resorption-test as a very reliable one, and has in many instances proved its value.

DR. R. W. TAYLOR, of New York, read a paper on

GONORRHEA IN THE FEMALE.

He stated that gonorrhea in women, as in men, consists in an exudative inflammation of the submucous connective tissue, and the genital organs of women are so extensive, complex, and involuted, and so profusely supplied with bloodvessels, which frequently undergo normal engorgement, that it can readily be understood why the morbid process may show a tendency to become chronic and lurk and hide.

Dr. Taylor stated that there has been a tendency developed within the past ten years to refer, in a loose and unscientific manner, all female ailments to gonorrhea, and attribute to many husbands, who in earlier days had gonorrhea, a gonorrheal infection of their wives, which produces serious consequences. The extreme and exaggerated views of Noeggerath, who claimed that 800 out of every 1000 men living in large cities suffered from gonorrhea, which they never recovered from, and who, on marrying, sooner or later infected their wives, have done much to perpetuate these ideas. There is a tendency nowadays to harp upon the longevity of the gonococcus, its Phenix-like power of resuscitation, and its relentless virulence. This idea, put forth by syphilographers, has had undue weight upon many gynecologists, who, under its influence, are led to think that the gonococcus in the male and female never dies, and is ever ready to produce pelvic mischief. Dr. Taylor said he has seen many young women who have suffered from uterine and pelvic disease after marriage, whose trouble was induced by instrumental manipulation at the hands of energetic young men possessed of an ambition to be known as gynecologists. Minor surgery is certainly the cause of a great many cases of uterine and pelvic disease. In estimating the importance of gonorrheal infection as a cause of female trouble we must individualize rather than generalize.

DR. PALMER said it has been stated, and correctly so, that in cases of diseased tubes, of long standing and containing large quantities of stagnant pus, the latter very frequently fails to show the presence of gonococci; on making a section of the structure of the tube itself, however, the gonococci are often found in the stroma. In one case of mono-cryptorchidism coming under his observation the incarcerated testicle had to be removed because of gonorrheal infection, and the gonococci were found in its intimate structures.

DR. GLENN said he regards the statements made by some gynecologists that a man never gets well from a gonorrhea as nonsense.

DR. BRANSFORD LEWIS said that the experiments of Wertheim have clearly shown the penetrative power of the gonococci.

DR. JAMES R. HAYDEN, of New York, read a paper entitled

IODOFORM-OINTMENT INJECTIONS IN THE TREATMENT OF SUPPURATIVE ADENITIS OF THE GROIN.

He described the method that he has employed in the treatment of buboes with satisfactory results. The operative field having been shaved and rendered surgically clean, a few drops of a 4 per cent. solution of cocain are injected beneath the skin where the puncture is to be made. The pus is then evacuated and thoroughly squeezed out through a small puncture. The abscess-cavity is then injected with pure hydrogen dioxid until the fluid returns practically clear. It is then washed out with a 1:5000 mercuric-chlorid solution and injected with a 10 per cent. iodoform-ointment. Then a cold mercuric-chlorid dressing is applied, with the idea of congealing the ointment. The patient should be kept quiet for forty-eight hours, although it is not necessary that he be confined to bed. The dressings are removed on the third or fourth day.

DR. W. K. OTIS said that he has had considerable experience with this method of treating buboes, and in many instances he regards it as the best. In most cases

he has found that a single injection is not sufficient. Sometimes balsam of Peru is more effective.

DR. POST said that by merely evacuating the buboes through an aspirator and applying a firm bandage we may occasionally effect a cure. We should remember that there is no single method that is applicable to all cases of buboes.

DR. TAYLOR said that he employs the Scott Helm-Fontan method of treating buboes with almost uniformly good results. The fact should be borne in mind that with syphilitic adenopathies we sometimes get a slight periglandular infiltration that is likely to give rise to the sensation of fluctuation.

DR. LEWIS said if enucleation is performed sufficiently early, when the skin is not very much involved, we can sometimes get primary union. In one case he succeeded in getting primary union on both sides. He has employed the injection-method with varying success.

DR. JAMES BELL, of Montreal, said that in his experience the cases suitable for the injection-method of treatment are comparatively rare. Enucleation should not be considered a serious operation. The only objection to it is that it requires the use of an anesthetic and leaves a scar. The greater portion of the wound can usually be sutured.

DR. BRANSFORD LEWIS, of St. Louis, read a paper entitled

THE INFILTRATION METHOD OF LOCAL ANESTHESIA IN GENITO-URINARY SURGERY,

in which he described the Schleich method of producing local anesthesia by the use of intracutaneous injections of very dilute solutions of various drugs. The principle of the method consists in injecting intra-cutaneously certain solutions, and dissipating the sensibility of the peripheral nerves by the pressure of the infiltrated fluid, by the anemia that it causes, and by the comparatively low temperature at which it is injected; the effects are produced by the fluid itself, rather than by any particular drug that it may contain. As a matter of fact, the drugs used are of only incidental importance.

In his various surgical procedures, Dr. Schleich found the three following solutions, of graded strength, to answer all purposes:

SOLUTION NO. 1.

Cocainæ hydrochloratis	gr. iij.
Morphinæ hydrochloratis . . .	gr. ⅓.
Sodii chloratis	gr. iij.
Aquæ destillatæ	ad ℥ iij.

M. Sterilisat. et adde sol. acidi carbolici (5 per cent.) gtt. 3.

The other two solutions are practically the same, the only difference being that in solution No. 2 the amount of cocain used is reduced to gr. 1½, while in solution No. 3 only gr. ½ of cocain is employed and gr. 1/12 of morphin.

DR. BRYSON referred to a case in which he performed complete castration for prostatic overgrowth under cocain-anesthesia. Of late, in operating about the bladder, he has been inclined to use cocain in preference to general anesthesia. He has employed very dilute cocain-solutions, and the results obtained did not impress him very favorably. He would prefer to use cocain in cases in which it is possible to strangulate the parts by a ligature, and so make sure that too much of the drug will not enter the general circulation too rapidly.

DR. CHISMORE said he has twice performed perineal section under the use of a very weak solution of cocain. In one of the cases the patient stated that he felt no pain whatever. In the other, the patient complained very much of pain when the deeper tissues were handled.

DR. LEWIS, in closing the discussion, said that by the method described we can operate on the deeper tissues and in regions that cannot be strangulated by a ligature. It has been employed in performing nephrectomy.

DR. EUGENE FULLER, of New York, made

REMARKS ON THE SEMINAL VESICLES.

These were largely in connection with the exhibition of a number of photographs of dissections, representing the normal and pathologic anatomy of the seminal vesicles. Dr. Fuller also reported a number of cases of seminal vesiculitis in which a cure of all the symptoms resulted from the employment of his method of stripping the vesicles.

DR. W. N. WISHARD, of Indianapolis, reported

THREE CASES OF EPITHELIOMA OF THE PENIS,

and exhibited a number of photographs illustrating the manner in which each was dealt with. In the first case the amputation was made close to the scrotum, and an opening was made into the urethra just behind the scrotum, which was utilized as a urethral canal. In the second case the corpora cavernosa and testes were removed entirely and the mucous membrane of the urethra was stitched to the margin of the skin. A small scrotal pouch was left for use as a flap in the event of any subsequent necessity for plastic work. The third case had been operated upon six months ago, an amputation being made very close to the scrotum. The operation was done under cocain, the patient refusing to take a general anesthetic, or to allow his testes to be removed. In all three of the cases the disease had advanced far back toward the scrotum at the time of operation, and in not one of them were the inguinal glands involved. In the first case recurrence took place at the point of amputation a year-and-one-half after the operation. In the second case, which was operated on over four years ago, and in the third case, which was operated on six months ago, there have been no signs of a recurrence.

DR. BRYSON referred to a case of epithelioma of the testes coming under his observation in which the abdominal glands became infected; the inguinal glands were not at all involved, although the scrotum had become infected some months previous to the patient's death.

DR. R. W. TAYLOR said that in carcinoma of the penis infection of the inguinal ganglia usually occurs, and even if the glands do not appear to be enlarged they should be taken out, as it has often been shown that they are distinctly carcinomatous.

DR. CHISMORE referred to a case of epithelioma of the penis in which he removed only about one-third of the glans penis in July, 1893. In a few months later the glands in the right groin became involved and were removed. In October, 1894, one of the glands in the left groin became involved and was removed; the wound never healed, and with the greatest rapidity there sprang from that incision a large growth which attained the size of a small cabbage. The patient died very recently.

DR. LEWIS said that the lines of infection in cases of carcinoma of the testes and of the penis are essentially different. In the former the direction of infection is in the iliac glands, while in carcinoma of the penis it is always in the groin. When the penis is removed for carcinomatous disease, he considered it desirable to remove the testes also, because if the latter are left, the stump of the penis, rubbing against the clothing, is likely to produce a certain amount of erethism, which increases the blood-supply to the parts and possibly acts as a factor in the recurrence of the disease.

DR. WISHARD, in closing the discussion, said that he is in favor of removing the testicles in these cases.

(To be concluded.)

AMERICAN NEUROLOGICAL ASSOCIATION.

Twenty-first Annual Meeting, Held at Boston, June 5, 6, and 7, 1895.

FIRST DAY—JUNE 5TH.

DR. PHILIP COOMBS KNAPPS, of Boston, delivered the

PRESIDENT'S ADDRESS.

He pointed out that the Association was organized twenty years ago, with a membership of thirty-five. At that time the idea of such a society was something of an experiment, as few similar societies existed in the world. The Association had, however, been successful, had increased until there were now eighty-five members, and the meetings had always been profitable and interesting. The society is not limited exclusively to specialists, as all who were interested in diseases of the nervous system had been welcomed to its ranks.

The scientific work done by members of the society was briefly reviewed, and it was shown that the chief work done in this country, with reference to diseases of the mind and nervous system, had been done by members of this Association. In regard to investigations in the anatomy and physiology of the nervous system, the work done in this country was still below that done abroad, and endowments for such researches are needed. The work done in the study of disease and its manifestations and in the treatment of nervous diseases has been much greater. American neurologists had done very much to advance our knowledge of the treatment of diseases of the nervous system, and no discovery in the last twenty years has been of as much importance as that of the rest-cure by one of the members of the society, Dr. Weir Mitchell, of Philadelphia.

Some of the needs for work in the future were then pointed out, among them being the need of a journal, under the control of the society, and greater recognition in our large hospitals, and a greater knowledge of nervous diseases by the physician in general practice. The greatest hope for the future in the treatment of nervous diseases lies in prevention. Many of the most serious affections are secondary to infectious diseases, and, therefore, with greater knowledge in the prevention and treatment of these diseases would come a diminution in the amount of nervous diseases due to them. It was considered advisable to put under a definite prescribed existence individuals who acquire nervous diseases by reason of a defective nervous organization. These individuals should also be protected from the mental contamination of neurotic and degenerate influences, whether in morals, religion, art, literature, or sociology.

There has been much claim of a vast increase in nervous diseases at the present time, but it does not seem probable that the conditions of life to-day are more exacting than those of life in the past, and with better food, more rational standards of living, and greater security for life and property, it seemed not improbable that there is an actual diminution in the amount of nervous disease.

DR. J. ARTHUR BOOTH, of New York, reported four cases of

HYSTERICAL AMBLYOPIA AND AMAUROSIS

successfully treated by hypnotism.

DR. F. X. DERCUM, of Philadelphia, thought it of interest to note that perception of light was normal in these cases. In his experience reversal of the color-field is not common, and does not occur so often as supposed.

DR. MORTON PRINCE, of Boston, asked if the patient's vision was noted during the hypnotic state. In his opinion the theory of a shutting-off of consciousness during hypnosis is a correct one. In many of these cases binocular vision is preserved, as proved by prism and stereoscope.

DR. G. L. WALTON, of Boston, said that experiments seem to show that the cases of this group really do see. The tests, however, do not prove that the patients are not simulating.

DR. BOOTH, in closing the discussion, replied that all of his cases were tested for binocular vision, but it was found absent. There was no cause for simulation.

DR. G. J. PRESTON, of Baltimore, read a paper on

COMPLETE HYSTERICAL ANESTHESIA IN THE MALE.

He related the case of a man, aged thirty-one years, a moderate drinker, who during a spree got into a fight, but received no injuries other than some slight bruises. A day or two after admission into the hospital he developed a small patch of anesthesia of the scalp. A few days later general anesthesia appeared. There was complete loss of tactile and pain-sense as well as temperature-sense. Muscular sense was greatly impaired, but not entirely lost. Taste and smell were lost and hearing impaired. There was great constriction of the visual fields and the color-fields were reversed. The reflexes, superficial and deep, were normal, as was the electric reaction. The patient gradually improved and finally recovered under hypnotic suggestion. Total anesthesia is a comparatively rare condition if the cases of transient loss of sensation be omitted. Stress was laid upon the importance and reliability of careful examination of the visual fields.

DR. GEORGE W. JACOBY, of New York, thought that cases of total hysterical anesthesia are not rare. They are most frequently found in cases of insanity. He referred to the case of a young girl, in whom he endeavored to determine the presence of ataxia, but it was not demonstrable. In the patients that he had observed there were also painful points on deep pressure.

DR. WALTON considered it unsafe to depend upon constancy of tests as establishing genuineness in cases of supposed hysteria. A clever simulant may pretend an

anesthetic boundary with sufficient constancy to fall within the limits of genuine variation.

DR. WM. M. LESZYNSKY, of New York, said that with proper precaution during the examination, and with present methods of investigation faithfully and persistently carried out, it was impossible for the cleverest patient, even an accomplished opththalmologist, to simulate successfully defective visual fields.

DR. J. J. PUTNAM, of Boston, believed that persons in apparent health are hysterical to a certain degree. The diagnosis must be made from the general aspect of the case, and not from any single symptom.

DR. W. A. JONES, of Minneapolis, asked if there was any immobility of the eyeball in Dr. Preston's case.

DR. J. MADISON TAYLOR, of Philadelphia, asked if there was any difficulty in locomotion, more particularly upon excitement.

DR. PRESTON replied that there was neither immobility of the eyeball nor difficulty in locomotion. The muscular sense was preserved and there was no ataxia. He had observed total anesthesia in one case of insanity. He thought we were too likely to neglect a careful study of the central organism while devoting so much time to the periphery.

DR. F. X. DERCUM, of Philadelphia, read a paper on

RAILWAY-SPINE,

and reported two cases with autopsy. In the first case there was excessive sprain of the muscles of the back and of the trunk generally, with marked spasm of the muscles and tremor, together with increased reflex excitability of the muscles and tendons. In addition, the symptoms so commonly observed in traumatic neurasthenia were typical, namely, disturbed sleep, startling dreams, sudden awakening with fright, excessive sweating, frequent micturition, occipital headache, tinnitus aurium, marked general weakness, etc. The patient died from some intercurrent disease. Careful examination of the nervous system showed no demonstrable lesion. In the second case there were severe traumatic left brachial neuritis and left brachial monoplegia, with atrophy of the muscles about the left shoulder; severe sprain of the muscles of the back; right hemianalgesia extending from the foot up to the level of the nipple; right hemithermo-anesthesia extending from the foot up to the level of the false ribs. The man was exceedingly weak physically, but mentally he seemed clear and accepted his situation in a philosophic spirit. He died suddenly from the rupture of an aortic aneurism. The post-mortem examination of the nervous system proved negative.

DR. JOSEPH COLLINS, of New York, said that although the autopsy and subsequent histologic investigation did not succeed in unravelling the mystery of the real basis of the traumatic neuroses, the cases are instructive because of the negative findings. He was in the fullest accord with Dr. Dercum as to the futility of attempting to demonstrate the organic basis of these diseases by means of older methods of investigation, more particularly by any such as require hardening in Müller's fluid for their preparation. In the first place, this procedure allows no cellular stain except the carmine, and this is so inferior to the Nissl stain that there should be no reason for using it; and, in the second place, even if it were a good one, the changes that go on in the structures which it stains, from lying for several months in a watery fluid, are such as to negative any conclusions that might be drawn from possible findings.

In one of Dr. Dercum's cases the ponto-bulbar symptoms were so pronounced, the facial twitchings, the hemiatrophy, the sensory disturbance, that it was extremely likely that some anatomic change was at the bottom of it. It seemed to him, moreover, that the presence of the large aneurism, which in all probability was of traumatic origin, would indicate that the changes in these cases are primarily vascular.

DR. CHAS. K. MILLS, of Philadelphia, looked upon these negative results as being very important. The microscopic examination should, however, have included the dorsal spinal ganglia.

DR. PRINCE said that the paper contained a direct proof of the theory of the traumatic neuroses. The patients of this group suffered from both psychic and physical shock.

DR. EDWARD D. FISHER, of New York, reported two similar cases still under observation. He believed there must be some pathologic changes to account for the symptoms in many of these cases.

DR. SMITH BAKER, of Utica, expressed the opinion that at the time of the accident there is a psychic copy formed which perpetuates this as a series of mimicry. A fixation of attention results, and may bring about changes in the higher cortical centers.

DR. L. C. GRAY, of New York, thought that the nature of these cases is still very puzzling. The term hysteria is objectionable. These railway-cases are, however, not hysterical.

DR. F. F. MILES, of Baltimore, predicted that in time we shall cease to consider some diseases as functional. The protoplasm of the neuron is altered in its activities by shock. Protoplasm has a tenacious memory (as we see when we have once taught it to make antitoxins) and may repeat an abnormal process until it is fixed by material change. The mystery is why this takes place in some cases of shock and not in others, and why this memory is perpetuated in the cell.

DR. DERCUM, in closing the discussion, fully realized the imperfect method adopted in preparing the specimens, but this was due to unavoidable circumstances in connection with the autopsy, and not to lack of familiarity with the newer methods.

DR. M. ALLEN STARR, of New York, then gave a lantern exhibition of

PHOTO-MICROGRAPHS OF NERVOUS HISTOLOGY; GOLGI STAINS.

This was followed by a lantern exhibition of the medulla oblongata of a chimpanzee with other specimens by Dr. Edward Wyllys Taylor, of Boston.

DR. THOMAS DWIGHT, of Boston, made an

EXHIBITION OF THE BRAIN OF A CHIMPANZEE.

He spoke of the brain of the chimpanzee "Jumbo," and discussed chiefly the anterior limb of the fissure of Sylvius. On the left this was distinct, ending in a bifurcation beneath a rudimentary *pars triangularis*. On the right it was represented by a minute depression not connected with the fissure.

DR. WM. TOWNSEND PORTER, of Boston, read a paper on

INHIBITION IN THE PHYSIOLOGY OF RESPIRATION.

He said that it is known that transverse division of the spinal cord between the bulb and the phrenic nuclei causes fatal arrest of the respiratory movements of the trunk. If death be prevented for a time by artificial respiration, the reflex powers of the cord gradually increase, and in the course of a few hours they may become so great that pinching the paws, blowing on the skin, suspending the artificial respiration, etc., may cause extended muscular contractions, including contraction of the respiratory muscles.

It is claimed that these contractions of the respiratory muscles after the separation of the cord from the bulb are proof that the respiratory impulse for muscles of the trunk is not derived from cells in the bulb, but originates in the spinal cord. Against this hypothesis of spinal respiration is urged the fatal arrest of respiration caused by separating the bulb from the cord. To this it is replied that section of the cord stimulates inhibitory fibers in the cord and thus suspends the action of the spinal respiratory cells.

The doctrine of prolonged inhibition of spinal respiration is easily overthrown by the following experiment: Hemisection of the cord usually arrests the contractions of the diaphragm on the side of the hemisection. This arrest is not an inhibition, for the diaphragm on the side of the hemisection begins at once to contract when the opposite phrenic nerve is cut. It follows that two hemisections, completely separating the cord from the bulb, do not inhibit the diaphragmatic respiration on their respective sides. The phrenic cells often send out no respiratory impulses after such a section, because they receive none from the bulb. The phrenic cells cannot themselves originate respiratory impulses. Hence the respiratory impulses do not arise in the spinal cord.

DR. THEODORE H. KELLOGG, of New York, read a paper on

THE PULSE OF INSANITY,

based on a study of 2172 cases, and gave tables and diagrams.

The general conclusions arrived at were: That there is, in established cases of insanity, considerable increase in the average frequency of the pulse, among both men and women. The average obtained from the 2172 cases was 84.8 per minute in the women and 80.8 in the men, giving a general average of 82.8 in the total number of patients studied. There was irregularity of heart-action in 5 per cent., intermittence in 2 per cent., heart-murmurs and heart-lesions in 8 per cent.

The general result of the sphygmographic studies was that abnormal tracings are to be found at some stage of the disease in the vast majority of cases of insanity. They are due to affections of the cortical and spinal motor and vasomotor centers, to various lesions of the sympathetic, to disorders of the pneumogastric, to peripheral and central vascular changes, to degenerations of central organs, to toxic agents in the blood, to autointoxications, to cachectic and diathetic conditions, to cardiac lesions, and to a great variety of intercurrent causes. No one sphygmogram is pathognomonic of any particular form of insanity, but there are certain general types of tracing that are found in one form of mental disease and not in another.

DR. CHARLES K. MILLS, of Philadelphia, read a paper upon

LOCALIZATION OF LESIONS IN THE PONS.

He reported the case of a man, fifty-three years old, with a syphilitic history, in which intracranial symptoms came on about eight months before death, the first being paralysis of the left abducens nerve. There had been attacks of weakness and dizziness. There were found paresis of the left leg and arm, paralysis of the left external rectus, paresis of the right external rectus, with some restriction of ocular movements to the left. The patient was extremely emotional, tending to break into laughing and crying without special incentive. No areas of anesthesia were discovered. The knee-jerk was exaggerated on the left side. Upon post-mortem examination a lesion of the pons and preoblongata was found, beginning about 15 mm. caudad to the junction of the pons and crus on the left side close to the median line, and almost entirely in the dorsal half of the pons. Sections through the lesion showed softened and degenerated tissue on both sides of the median line, much more marked on the left. On microscopic examination the parts involved in the lesion were found to be the right mesal fillet and pyramidal tracts to a slight degree, and the root-fibers of the abducens. For purposes of localizing small gross lesions in the pons, Dr. Mills divided each half of the pons and preoblongata into nine segments, three ventral, three dorsal, and three intermediate between the ventral and dorsal.

(To be concluded.)

CORRESPONDENCE.

LONDON LETTER.

Death of Sir George Buchanan and Mr. Arthur Durham—The Illness of Professor Huxley—The Antitoxin-treatment of Diphtheria—The Serum-therapy of Carcinoma—The Wilde Case—Some Recent Wills.

THE medical profession in this country has lost two distinguished members in the persons of Sir George Buchanan, late principal officer of the Local Government Board, and Mr. Arthur Durham, senior surgeon to Guy's Hospital. Buchanan spent the whole of his professional life in the public service, and his influence in the furtherance of sanitary reform can hardly be overestimated. He had the power—somewhat rare among scientific investigators—of making his reasoning intelligible and his conclusions clear to the non-scientific. His researches on the conditions of soil that foster tuberculosis and on the connection between the distribution of enteric fever and the pollution of the water-supply had a most powerful effect in awakening the public mind to the national importance of sanitary betterment. The bent of Buchanan's mind was essentially scientific, and though he was by no means lacking in administrative ability he did better work in a subordinate position than as chief of his department. He was impatient of the economic prudence and regard for expediency which made the statesmen with whom he had to work disinclined to sacrifice everything to what was flippantly

called a "policy of sewers." He was also, it must be admitted, a little intolerant of difference of opinion on any scientific matter as to which he had made up his mind; and this sometimes led to unnecessary friction in administration. Personally, Buchanan was one of the best and most lovable of men; he had no official priggishness about him, either in his relations with the public or with his own subordinates, and he despised convention to the point of walking down Regent Street in the height of the London season with a pipe in his mouth. He died of malignant disease of the intestine, for which colotomy had been performed.

Mr. Arthur Durham's name is probably best known to the profession at large in connection with the tracheotomy-tube which he devised; he also did some sound experimental work on the physiology of sleep, and contributed articles on surgical subjects to Holmes' *System of Surgery* and Quain's *Dictionary of Medicine*. He was a good practical surgeon who never entirely succeeded in finding antiseptic salvation, and a man of genial, convivial temper, very popular with his professional brethren and much liked by all who knew him.

Professor Huxley, who completed his seventieth year on May 4th, has been ill very nigh unto death, but he is now surely, though somewhat slowly, recovering. He was attacked by influenza early in March, and for several weeks his condition was extremely serious; indeed, once or twice the situation was considered to be quite hopeless. His heart has long been a weak point, and the late Sir Andrew Clark seven or eight years ago gave a gloomy prognosis based on the condition of that organ. One or two visits to Maloja, with a course of graduated hill-climbing on Oertel's system, however did the Professor so much good that he left London and settled at Eastbourne, a fashionable health-resort on the Sussex coast, where he lives in a pretty house (designed by one of his sons-in-law, who is an architect) on the slope of the South Downs, which end in the tall white cliffs of Beachy Head. Here he found not only air, which acts on many invalids like champagne, but opportunities of carrying out the hill-climbing treatment under the best possible conditions. At Eastbourne Huxley got what seemed to be a fresh lease of life; he walked with the step of a man in the fulness of his strength, and the amount and quality of his literary work gave the clearest evidence of renewed health. Just before he fell ill the first part of his critical examination of Mr. Balfour's *Foundations of Belief* appeared in the *Nineteenth Century;* the attack was so acute that he was unable to correct the proofs. It is impossible to say when the second part will be written, but it is certain that it will be some time before Huxley is again able to wield the pen. Throughout his illness Huxley's cheerful fortitude was the admiration of those about him. He never complained and never showed the slightest perturbation of spirit. He was keenly interested in his own symptoms, and brought his vast physiologic knowledge to the discussion of them with his medical attendants as calmly as if he had no personal interest in them; in the matter of treatment, however, he was a model of obedience, never arguing or suggesting, but leaving himself entirely in the hands of those who had charge of him. He said to one of his doctors: "When I was at sea (he was a surgeon in the Royal Navy for several years) I have sometimes been awakened in the night by the tossing of the ship in a storm. When I heard the voice of the officer of the watch overhead I turned over and went to sleep again with the thought that it was his affair, not mine." In the same spirit, when during his illness the ship of life seemed on the point of being wrecked, he would say to the physicians: "Do whatever you think right, it is your affair, not mine." He said that throughout his life he had held fast to two principles: First, always to obey orders; and, secondly, never to tell a lie, big or little. A thing which greatly alarmed his doctors was the extent to which he lost flesh; so emaciated did he become that he laughingly said he could demonstrate the processes and markings of the femur, tibia, and fibula on his own "shrunk shank." The varying phases of his illness have been followed by his fellow-countrymen with a sympathetic interest, which is in remarkable contrast to the abuse, hatred, and all uncharitableness with which he was pursued twenty or thirty years ago.

There is a distinct lull here in the excitement about the antitoxin-treatment of diphtheria. This is not due to any disenchantment, such as followed the discovery that the vaunted *currus triumphalis* of tuberculin was only a "one-hoss shay" of rickety constitution, it is simply the settling down of a turbid enthusiasm to the pure translucency of sober judgment. The general feeling in this country is the same as that expressed by the resolution which was the outcome of the great debate on the subject at the German Congress of International Medicine recently held at Munich. This was, broadly, to the effect that the method, though distinctly hopeful, must still be considered as being on trial. Meanwhile evidence is being accumulated, sifted, and weighed. A Committee of the Clinical Society of London is conducting an inquiry on the subject, and will report in due course. Clinical experiments on a large scale are being carried out in the hospitals of the Metropolitan Asylums Board, which are set apart for infectious diseases, and the results are being digested by Dr. Sims Woodhead, the head of the laboratory of the Royal Colleges of Physicians and Surgeons, who in the fulness of time will embody them in an exhaustive report. The Board declines to allow any information whatever to leak out, even as to the general drift of the evidence so far collected; it is hardly to be wondered at, therefore, that there is a growing feeling that the figures are not coming out altogether favorably for the antitoxin. The profession is waiting somewhat anxiously for this report, and the situation at present may be described, in a phrase of Lord Salisbury's, as one not of suspended animation, but of "animated expectancy" on the subject.

Almost simultaneously fresh victories for serum-therapy —this time in the treatment of carcinoma—have been claimed by Emmerich and Scholl in Germany, and by Richet and Héricourt in France. The former used the serum of animals which had been inoculated with erysipelas, and the results as reported appeared to be very satisfactory. The hopes excited by Emmerich's paper have, however, been somewhat dashed by the announcement that Professor Angerer, of Munich, in whose wards the experiments were made, denies that the erysipelatous serum had any effect on the cases of carcinoma in which it was tried. At a meeting of the Munich Medical Society on May 15th, at which Emmerich, although he had received due notice, failed to put in an appearance,

Angerer gave details as to all the cases that had been treated with serum and showed that the alleged specific effect was what mathematicians call a vanishing quantity. In one case not only had the disease said to be "definitely cured" recurred, but the patient had actually died a month before Emmerich and Scholl published their paper. The matter can hardly end here. It is impossible to believe that a man of the scientific standing of Professor Emmerich could have intended to mislead his professional brethren, and, on the other hand, it is almost equally difficult to believe that he himself could have been so grievously misled in a matter admitting of such easy verification. An exactly similar conflict of testimony took place at Vienna three or four years ago when Adamkiewicz reported some marvellous results from the treatment of malignant disease with a "cancerin" or "cancroidin" of his own concoction, and Albert, in whose clinic the remedy was used, at once challenged his statements, and asserted that the treatment had done no good. There is no reason to doubt the honesty of Adamkiewicz, who has since given his results to the world in a book, which bears the marks of good faith. He and Emmerich are, like Koch, simply living proofs that even the celestial minds of seekers after scientific truth are subject to the psychologic law that the wish is often father to the thought. Richet and Héricourt used serum from the blood of an ass and two dogs, into which liquid squeezed out from an osteo-sarcoma of the leg had been injected. Two cases—one of fibro-sarcoma and one of carcimona of the stomach—have been treated with this serum with what is claimed to be a successful result. In neither case, however, does there appear to be sufficient evidence, even on the authors' own showing, that a radical cure has been effected.

The trial of Oscar Wilde has had a special interest for medical men, not only on account of the striking confirmation which it afforded of Max Nordau's views as to the unwholesome tendencies of "degenerate" literature and art, but because the convict who is now expiating his offence at the treadmill is the son of a distinguished member of the profession. Sir William Wilde, who happily did not live to see his honored name disgraced by an unworthy son, was ophthalmic surgeon to the Queen in Ireland, and also one of the best otologists of his day; in the latter department his name is perpetuated by "Wilde's Snare." He was a man of versatile ability and varied knowledge, and won a considerable reputation in more than one province of intellectual activity outside his own profession, notably in archeology. Oscar himself was simply an insufferable coxcomb, who very likely saw in unnatural vice a means of adding to the notoriety which was as the breath of his nostrils. There can be no doubt he had a corrupting influence among sickly minded *graciles pueri* at Oxford, who, in their worship of what they took to be "art," tried to make up for an imperfect knowledge of Greek literature by aping Greek vices. In spite of the howls of indignant virtue in the English press the trial revealed nothing new to those who have seen things as they really are in London and in our great public schools and universities. The fact that the police, with the clearest evidence to go upon, have on several occasions allowed notorious criminals of the same kind to elude the clutches of the law, lends color to the belief that, although Oscar Wilde's doings have been perfectly well known to them for years, no action would have been taken had not the culprit himself, apparently from his very love of self-advertisement, forced the hands of the Public Prosecutor. Having avenged itself on one conspicuous malefactor British morality will now comfortably go to sleep again for some years.

The wills of a few prominent physicians and surgeons who have recently passed away may serve to give some idea of the financial condition of the medical profession in this country. Sir William Savory, an ex-president of the Royal College of Surgeons of England and consulting surgeon to St. Bartholomew's Hospital, left personal estate to the amount of £93,190 ($465,950). His practice was a good one, but his name was not a household word like that of Lister, Paget, Spencer Wells, or Henry Thompson. Mr. Arthur Durham, whose death is referred to in an earlier part of this letter, has left personal estate valued at £76,338 ($381,690). He was a popular man, in large practice, but with a fine liberality in money-matters that makes it somewhat surprising that he managed to save as much as he did. Mr. J. W. Hulke, who died while holding the office of president of the College of Surgeons, left personalty to the amount of £8018 ($40,090). He was a first-rate surgeon, and a man of great scientific reputation; his professional skill was, however, to a large extent neutralized, as far as success in practice was concerned, by a manner which was the reverse of conciliatory, and which made him unpopular with many of his brethren. Dr. Hack Tuke, one of the leaders in psychologic medicine, left personal estate amounting to £29,459 ($147,295). By far the largest fortune left by any physician since Sir Andrew Clark was that of Dr. Francis Bisset Hawkins, who died last December within a few weeks of the completion of a century of life. His personal estate was valued at £133,403 ($667,015), and there was considerable real estate besides. The greater part of Dr. Hawkins's wealth, however, was inherited, for he was at no time a busy physician, and he retired from practice at about the age of forty. The quarter of a million left by Clark, and the still larger amount left by Gull, were only partly made by the practice of medicine. Both these successful physicians numbered among their patients mighty men of finance, who acted as their pilots amid the treacherous shoals and currents of the money-market. The average British doctor, whether in town or country, as a rule, leaves little beyond the amount of his life-insurance and the "good-will," whatever that may be worth, of his practice. The average net income of physicians throughout the country probably does not exceed £500 ($2500).

THE TREATMENT OF OPIUM-NARCOSIS WITH A STRONG DECOCTION OF COFFEE GIVEN HYPODERMICALLY.

To the Editor of THE MEDICAL NEWS,

SIR: As the question of the treatment of opium-narcosis has frequently been before the readers of THE MEDICAL NEWS, and, as potassium permanganate is running the gauntlet of medical opinion as an antidote to the Jupiter of drugs, is perhaps in order at this time, I would like to record a case treated by me several years ago.

On April 3, 1891, I was called at 11 o'clock P.M. to

see an infant five months old. When I reached the house, which was only a mile from my office, the following circumstances connected with the case were ascertained: During the absence of the mother a little girl, ten years old, gave the baby one teaspoonful of laudanum to hush its crying. The girl had often seen the mother give paregoric, hence the mistake. I was told that the infant vomited about ten minutes after taking the drug. The clothes were stained by the vomited matter. The odor of the drug was present. Just how much of the narcotic was retained is a matter of speculation. Six hours had elapsed after the poison had been given before I was called. Upon examination I found the infant suffering from opium-poisoning of the profoundest type. Respiration had almost ceased, occurring only once or twice to the minute. The heart was rapid, irregular, and weak, and a cold, clammy perspiration covered the entire body. The pupils were almost imperceptible. I was determined to make a desperate effort to save the life of this comely and healthy infant, and concluded to remain on the field as long as life lasted. Emetics were not given, owing to the child's inability to swallow. Siphoning out the contents of the stomach was not resorted to as I did not have any kind of tubing with me. Even if these measures had been practicable I doubted their utility, as the time for such treatment had passed. As internal medication was impossible I resorted to the hypodermic method to combat the poison. I requested the mother to make a strong decoction of coffee, equal parts of ground coffee and boiling water, which is about as strong as it can ordinarily be made. Of this fluid I injected about twenty minims every ten or fifteen minutes. After three or four injections had been given it was quite evident that two foes had met upon the circulatory field. The child would start in its abnormal sleep as if haunted by some hideous monster. From this time on the respirations were more frequent. The heart's action became slower and stronger. In fact, the three feet of the great vital tripod were aroused from their lethargy by a powerful and direct stimulant.

After working with my little patient for about six hours he was brought within the safety-line. Artificial respiration and titillation with the ends of the fingers over the ribs, to induce the respiratory act, were kept up throughout the entire time of treatment This case, taken in its entirety, must place coffee, when given in strong decoction subcutaneously, as an antagonist to opium of the highest order. Yours truly,

C. D. SIMMONS.

DUTCH TOWN, LA.

THE TREATMENT OF HYDROPHOBIA IN 1806.

To the Editor of THE MEDICAL NEWS,

SIR: I have copied from an old manuscript (1807) the following, which, if true, shows that legislators were just as crooked in 1806 as they are now:

"CURE FOR THE BITE OF A MAD DOG.

"The following is an account and prescription of the remedy and cure for the hydrophobia, or canine madness, made by John M. Crous, in conformity to an act of the Legislature of the State of New York at their present session (1806), viz.:

"1st. Take one ounce of the jaw-bone of a dog, burned and pulverized, or powdered to fine dust.

"2d. Take the false tongue of a newly foaled colt; let that be also dried and pulverized . . . and . . .

"3d. Take one scruple of the verdigris which is raised on the surface of old copper by laying in moist earth; the coppers of George I or II are the purest and best. Mix these ingredients together, and if the patient be an adult or full grown, take one common teaspoonful a day, and so in proportion for a child, according to its age. In one hour after take the filings of the one-half of a copper of the above kind, if to be had; if not, then a small increased quantity of any baser metal of the kind—this to be in a small quantity of water.

"The next morning, fasting (or before eating), repeat the same as before. This, if complied with after the biting of the dog, and before symptoms of madness, will effectually prevent any appearance of the disorder; but if, after the symptoms shall appear, a physician must immediately be applied to, to administer the following, viz.: Three drams of the verdigris of the kind before mentioned, mixt with half an ounce of calomel, to be taken at once. This quantity the physician need not fear to administer, as the reaction of the venom then diffused throughout the whole system of the patient neutralizes considerably the powerful quality of the medicine, and . . . Secondly, if in four hours thereafter the patient is not completely relieved administer four grains of pure opium or one-hundred-and-twenty drops of liquid laudanum.

"N. B.—The patient must be careful to avoid the use of mik for several days after taking any of the foregoing medicines. JOHN M. CROUS."

Paid by the Legislature.

If true, the standard of intelligence was of no higher order than that shown by the Congress of the United States a few years ago, when it appropriated $10,000 to experiment upon the shaking of rain out of the dry sky by the explosion of dynamite sent up in balloons for the purpose. The experimenters got the money and the Government the experience. J. W. MOORE.

EASTON, PA.

EVACUATION OF THE TYMPANUM.

To the Editor of THE MEDICAL NEWS,

SIR: I thank Dr. B. Alex. Randall for calling my attention to Toynbee's experiments, showing that exhaustion of the tympanic cavity and the Eustachian tubes took place in the act of deglutition with the nose and mouth closed. My reading and discussions with medical men (some of them aurists) had failed to bring this to my notice. The first mention of such an experiment was in THE MEDICAL NEWS (No. 1166, p. 567), where Dr. Randall states that he can secure as good exhaustion of the tympanic cavity by this means as by the real reversal of the Valsalva plan (and my method is in effect simply this): I maintain that the facts are against him, as may be proved by making a few trials. The effect of the Toynbee plan is too feeble to be of any practical use, and especially is this the case when congestion and inflammation of these structures exist. It was in this condition that I found my plan so valuable—by creating a vacuum blood-pressure is lessened, tension diminished, and pain

relieved—in fact, a threatened abscess prevented. I did not say that in the stage of exudation the evacuation of products would be greatly promoted. Nobody can deny that it will assist a little. The tympanic cavity contains at any time only a small quantity, so that one drop of fluid got rid of plays an important *rôle*. I simply gave my own experience, and, as I got relief from pain and avoided the dangers and sufferings of probably a second mastoid abscess, I can surely be forgiven if I have shown a little enthusiasm. My plan of treatment came to me by accident, suggested at the time by my sufferings. I was seeking relief from pain which I experienced. I had and have no desire to ignore anybody or violate any physiologic facts. I published the article to have the treatment tested by others, and will be governed by the result of experience. Furthermore, as I got so much good from it I was anxious to contribute to the relief of others who might be suffering in the same way. I have tested it in a good number of cases and always with good results, and have not once seen any bad effect following it. It is my intention to publish my cases as soon as convenient, and let this plan of treatment speak for itself. I have no fear of a few insinuating and very sarcastic (as well as uncalled-for) remarks having any other effect than to commend more generally this plan of treatment to the profession. It will then be time enough to make comparisons and draw conclusions.

Very truly yours,

DONALD B. FRASER.

STRATFORD, ONTARIO.

TEST FOR INDICANURIA.

To the Editor of THE MEDICAL NEWS,

SIR: The following test for indican in urine, a modification of Jaffe's test, may be of interest and new to some of your readers, as I have not seen it in any book on urinary analysis.

Take equal quantities of urine and hydrochloric acid, add a few drops of hydrogen dioxid, and then the chloroform, as in Jaffe's test. The advantages of H_2O_2 over sodium hypochlorite are that the reaction takes place more rapidly, the color is more distinct, and therefore better for approximate comparative quantitative analysis; the reaction also seems to oxidize the indican more completely, and therefore, for quantitative analysis of evaporation of chloroform and weighing the indigo, more reliable; and, lastly, the hydrogen dioxid introduces into the urine no substance likely to interfere with the test in the presence of albumins. Yours truly,

H. V. RICHARDSON.

BALTIMORE, MD.

NEWS ITEMS.

The Second International Congress of Gynecology and Obstetrics will be held at Geneva, Switzerland, during the first week of September, 1896. The following subjects will receive consideration: The relative frequency and the forms of contracted pelvis most commonly observed in different countries; The treatment of eclampsia; The operative treatment of posterior displacements of the uterus; Pelvic suppuration and its treatment; Modes of suture of the abdominal walls—the best methods of avoiding abscess, eventration, hernia, etc.

The French Association of Surgery will hold its ninth Congress at Paris on October 21, 1895. Two subjects will receive consideration: I. The surgery of the lung (excluding the pleura). II. Early or late operative intervention for solutions of continuity in bone.

Dr. T. Mitchell Prudden, of New York City, will deliver the Annual Address in Medicine at the commencement exercises of Yale University on June 25th. His subject will be: "New Outlooks in the Science and Art of Medicine."

The State Board of Medical Examiners of New Jersey will hold a special meeting for examination of candidates July 23d and 24th. Applications must be completed ten days prior to the examination.

Correction.—The word "fluorescin" in the Progress-note on p. 615 of THE NEWS of June 15, 1895, 9 lines from the end, should have been "fluorescein."

Trendelenburg has been made Professor of Surgery and Director of the Surgical Clinic at Leipsic, in succession to the late Prof. Thiersch.

Verneuil, the distinguished French surgeon, died at Paris on June 12th, at the age of sixty-two years.

BOOKS AND PAMPHLETS RECEIVED.

Castration for Hypertrophied Prostate. By B. Merrill Ricketts, M.D. Reprinted from the Times and Register, 1894.

The Treatment of Gonorrhea by Irrigation of the Urethra. By H. M. Christian, M.D. Reprinted from the Therapeutic Gazette, 1894.

The Shaw Gas-tester for Detecting the Presence and Percentage of Fire-damp and Choke-damp in Coal Mines, etc. By Joseph R. Wilson. Excerpt from the Transactions of the Federated Institution of Mining Engineers. London and Newcastle-upon-Tyne: Andrew Reid & Co., Limited, 1894.

Painless Childbirth, or Status of the Means to Prevent Birth-pain. By William B. Dewees, A.M., M.D. Reprinted from the International Medical Magazine, 1894.

The Third Annual Report of The Sheppard Asylum. A Hospital for Mental Diseases. Baltimore, Md., 1895.

Notes on the Newer Remedies. Their Therapeutic Applications and Modes of Administration. By David Cerna, M.D., Ph.D. Second edition, enlarged and revised. Philadelphia: W. B. Saunders, 1895.

Syllabus of Gynecology, based on the American Text-book of Gynecology. By J. W. Long, M.D. Philadelphia: W. B. Saunders, 1895.

Laboratory Guide for the Bacteriologist. By Langdon Frothingham, M.D.V. Illustrated. Philadelphia: W. B. Saunders, 1895.

Blood-serum Therapy and Antitoxin. By George E. Kreiger. M.D. With illustrations. Chicago: E. H. Colegrove & Co, 1895.

The Theory and Practice of Medicine. By Frederick T. Roberts, M.D., B.Sc., F.R.C.P. Ninth edition. Philadelphia: P. Blakiston, Son & Co., 1894.

On the Relation of Urea to Epilepsy. By J. Nelson Teeter, M.D. Reprinted from the American Journal of Insanity, 1895.

The Dynamics of Life. An Address delivered before the Medical Society of Manchester, October 3, 1894. By W. R. Gowers, M.D., F.R.S. Philadelphia: P. Blakiston, Son & Co., 1894.

School-children's Eyes. A Plea for the Examination of Every Child's Eyes when Commencing to Attend School. By W. F. Southard, M.D. Reprinted from the Journal of the American Medical Association, 1894.